

AMERICAN GAS ASSOCIATION MONTHLY



Vol. VII

No. 4

APRIL, 1925

WE BELIEVE that we can best serve our own country, and most successfully discharge our obligations to humanity, by continuing to be openly and candidly, intensely and scrupulously American. If we have any heritage, it has been that. If we have any destiny, we have found it in that direction.

—*Calvin Coolidge*

The new sales service is a "humdinger!"

BY the time this announcement appears, the subscribers to the Sales Service will have received the prospectus for the 1925 program beginning April 15.

Those of you who have seen this prospectus need not be told that the 1925 Sales Service is a big step forward in the development of the plan for increasing sendout.

The new service is vastly extended in scope. It is much more practical—because it is planned and completely worked out to fit into the month-by-month needs of the sales manager on the one hand and his sales force on the other. A more practical and thorough and more effective handling of Home Service activities is also provided.

One of the many striking features is that of a complete properly timed window display service, giving full directions and instructions by photograph and diagrams for use.

Every feature is tied up to a series of bi-monthly sales campaign plans, the program for which has been carefully worked out so that it will be sure to get the greatest possible cooperation from local gas companies. The net result is sure to be—

- 1st. Bigger individual local sales response and
- 2nd. More effective joint effort from a national point of view.

Those of you who have not yet seen this prospectus should write at once to get a copy. Every important executive in every gas company in the United States should receive this service and we believe that the management of each gas company should see that they get it.

(P. S. Although the service has been greatly enlarged and extended, the price remains the same.)

High Points of Service

- 24 complete sales plans. Issued bi-monthly. Completely worked out. Ready for use. Full directions for contests — development of sales organization — sales presentation—timely stunts for publicity and advertising—direct mail instructions, suggestions and examples—store and display suggestions, including especially complete WINDOW DISPLAY SERVICE.
- 12 Monthly Home Service Bulletins.
- 12 Monthly Bulletins for Salesmen.
- 12 Window Display Bulletins.
- 12 Monthly Trade Promotion Bulletins.
- 12 Monthly Bulletins for the Sales Managers.
- Monthly briefs on general sales problems of timely interest.

(Each of the above bulletins is planned and worked out and is written so that it ties in perfectly with the 24 sales plans.)

Write for prospectus.
Get full details.

The Committee

The Sales Stimulation Committee
of the Commercial Section of the
American Gas Association.

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AMERICAN GAS ASSOCIATION MONTHLY
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HENRY OBERMEYER

Editor

Advisory Committee

F. L. BLANCHARD

A. W. HAWKS, Jr.

J. M. BENNETT

H. C. CLARK

E. F. GARDINER

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\$3.00 PER YEAR

FOR STATEMENTS AND OPINIONS CONTAINED IN PAPERS AND DISCUSSIONS
APPEARING HEREIN, THE ASSOCIATION DOES NOT HOLD ITSELF RESPONSIBLE

EDITORIAL

On the Ground

And what of the domestic customer?

The manufactured gas industry is said to be rapidly approaching the point where it will have to choose between the kitchen range and the industrial burner.

Is it worth going after the business of Mr. and Mrs. Brown and their three children when a single factory installation on the outskirts of town may require 500 times as much gas fuel?

We do not think that such a choice is necessary. Nevertheless, here is the place where the gas industry must keep its feet on the ground.

The future of gas undoubtedly lies in its wholesale application to industrial and other types of heating. But the foundations and keystone of the industry will always remain in the home, for gas has become a permanently indispensable factor in the modern standard of living.

Great industrial projects appeal to the imagination and spur us on to greater efforts. At the same time, gas men must not let such prospects turn their heads.

The domestic customer, which means the public, will not permit even the slightest recession from the high standard of service which the gas industry has set.

Proportion

A healthy sign in any organization is the fact that every man thinks his own job is the most important.

It stops being a healthy sign when the same men start acting on that assumption.

Engineering talent has made gas fuel possible. Practically all of the present day economies and efficiencies of gas service are owing to our engineers. That is where gas begins.

Financial acumen and management have made the gas industry possible. Local service on a national scale has been their contribution. That is how gas progress is being directed.

The newest job—public relations—

which simply means helping the public and the gas company to understand each other, is making gas service universally respected and appreciated.

Because the director of public relations has more opportunity for direct and visible expression than either of the other classes, there is a tendency to regard his department as being in the forefront of the procession.

This is not strictly true, and should not be if it were. Progress lies in the pathway blazed by engineering, supported by a farseeing type of management that is thoroughly "sold" on the future of the industry.

Public relations do not make progress. They do, however, constitute the place where progress first makes itself felt.

Reprints

We wonder—and hence these paragraphs—how many of our readers and contributors realize that they can obtain reprints of virtually any article published in the MONTHLY at an average cost of two cents per copy, when such reprints are ordered in quantities of 500 or more.

This is just another service, however small, such as the Association is ever seeking to offer its members.

The printers of the MONTHLY have instructions to hold all published material in type for a reasonable time after the issue has come from the press. The extremely low cost of reprints is thus owing to the fact that the Association has already met the cost of composition.

Reprints will be gladly made in accordance with the above. Requests should come either from the author or from some responsible person in the company with which the writer of the article is connected.

It will be readily appreciated that no reprints can be made, except at additional expense, after the type has once been destroyed. Therefore, we urge that all such orders be sent as early as possible after receipt of your copy of the MONTHLY.

AMERICAN GAS ASSOCIATION MONTHLY

Vol. VII

APRIL, 1925

No. 4

The Peak Load Bogey in House Heating

By H. C. DEFFENBAUGH, Rochester Gas & Electric Corp., Rochester, N. Y.

A CLASS of business in which a fifth of the total annual sales occur in one month of the year does not off-hand look very attractive as compared to many classes of business which the gas companies would like to supply. As a class of business by itself, it is apparent that in gas house heating, due to its low annual load factor and the months in which the plant supplying it would have to be idle, the fixed charges would eat up any profit that could be made at the usual residential rates or by any of the present standards of gas production.

In spite of this gloomy picture, there are many companies which could add a considerable amount of this business at a profit. That it can be taken on at a price 50% to 100% above the cost of heating with coal has been demonstrated; in other words, with coal at \$15 per ton and gas at \$1.00 per M, gas heating by its convenience can be sold at an equivalent of \$30 per ton of coal.

The actual price at which gas heating can be sold must, of course, depend upon the load characteristics of the business which a company is at present supplying. If a company is so fortunate as to have its period of maximum sendout during the summer months, the price limit is set not so much by the cost of supply as by

the fact that an extremely low rate for gas house heating might reverse the load conditions so that the winter sendout might exceed that of the summer and the heating business thereby incur such heavy fixed charges as to impair rather than to better conditions.

As conditions are not the same in any two localities, the question of the desirability of supplying gas house heating can be determined only by study of the local conditions. The peak load conditions of the gas house heating business may in some cases operate to increase the producing company's load factor; in another it may decrease an already poor load factor. When all conditions are studied, it may be found that a moderate amount of house heating can be served without detriment to the balance sheet. The experience of the Rochester, N. Y., company may be given to illustrate the conditions in one locality where a limited amount of gas house heating can be taken on without increasing in any way the cost of other domestic service.

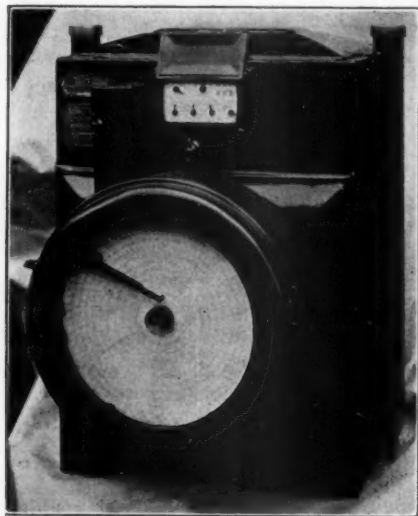
In studying the effect of the house heating business, it must be viewed from two angles. First, as to its effect on the manufacturing plant, and second, as to its effect on the distribution system. The situation in Rochester is as follows:

During the heating season of 240 days, the average temperature is 37° . During January and February, the temperature ranges mostly between 20 and 30° above zero. Probably twice during each of these months the temperature suddenly drops to zero or 5° above zero, and as suddenly returns to 20 and 30° above. During these sudden drops, there is an increase in daily sendout of 5 or 10% above normal, but this increase in sendout is never extended over a period longer than two days, and generally is not above the normal sendout for more than one day. Due to the fact that these sudden jolts are of

dental heating being to level out the difference between the morning, noon and evening peaks. The morning peak may be increased slightly but there is no apparent increase in the maximum evening hourly peak. As in Rochester the evening peak is always in excess of the morning peak, the situation in regard to incidental heating is that the plant normally has sufficient capacity to absorb the sudden short increases in sendout, and the effect on the distribution system is nil owing to the fact that the hourly maximum peak is not increased. When we study the all-year-round house heating characteristics in Rochester, we find that the monthly heating requirements in per cent of the entire heating season are as follows:

October	6%
November	12%
December	17%
January	19%
February	18%
March	14%
April	10%
May	4%

The peak load characteristics of house heating may be shown by the following figures. If the individual furnace demand is taken to be 100 cubic feet per hour (actual measured maximum hourly consumption, not rating of burners), the aggregate demand of a group due to diversity has averaged 85 feet. This diversity is due to thermostatic control and the difference in starting time in various houses. The consumption on a zero day has for a group of customers averaged 19.5 times the aggregate maximum hour demand, that is, the maximum daily consumption has been 19.5 times 85 feet demand or 1,658 cubic feet. The annual consumption has been found to be 116 times the maximum day, or 192.3 M cu. ft. per year per 100 feet of individual demand. In comparison with our present



Recording the Hourly Demand

such short duration, the plant has no difficulty in keeping ahead of them. The normal reserve capacity has been ample to take care of all sudden increases in load due to incidental heating. These jolts we will get whether we sell gas house heating or not.

While a zero day may cause a sharp rise in the 24-hour sendout from the works, no such sudden rise is shown in the hourly peaks, the effect of the inci-

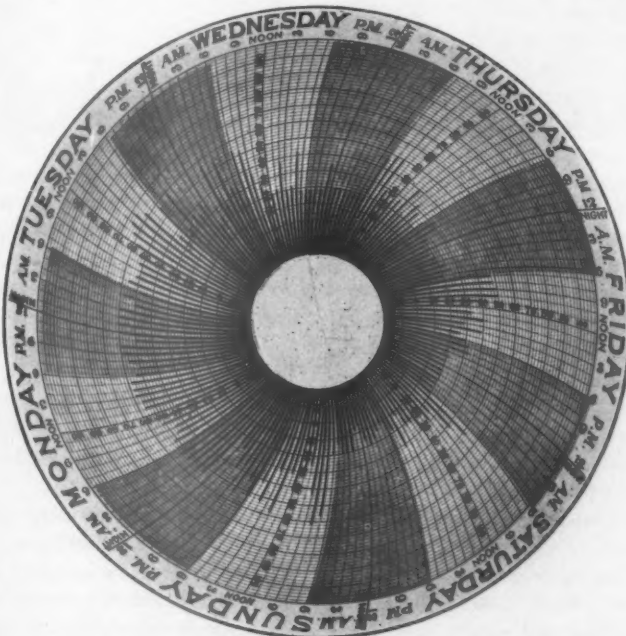
business, we find that present annual sales are 300 times the maximum day.

Off-hand it would appear that the fixed charges per M for the heating business as compared to our present business would be 300 divided by 116, or over $2\frac{1}{2}$ times that of the present business, and consequently the househeating rate would have to be considerably higher than the normal residential rate. Two conditions make possible the addition of a limited amount of house heating business, first, the fact that September is our month of maximum sendout, while January is the month of maximum heating requirement, and second, the fact that the heating peak occurs in the morning of each day, while our present hourly peak occurs in the evening.

Taking up the first condition, that is, the diversity between the September and January sendouts, we find that the maxi-

mum days in September run around 1,000,000 cubic feet per day more than the normal maximum day's sendout in January. This difference would permit of an addition of 175 to 200 house heating customers without disturbing in any way the normal operation of the plant. As this 1,000,000 cubic feet per day is about 10% of the average daily sendout, it is conceivable that, because of the short duration of the extremely cold periods, a considerably larger number of heating customers could be added before the plant would be in difficulties.

Now as to the second consideration mentioned above, that is, the effect of the hourly rather than the daily variation in demand, the variation in hourly demand does not affect the plant, but it has a decided bearing when we consider the distribution system. In Rochester the domestic load accounts for 75% of the



HOURLY PEAKS NOT A PROBLEM

Effect of Incidental Heating to Level Out Difference between Morning, Noon and Evening Demand

sendout, so that, as far as the distribution system is concerned, the effect of added heating load is tied up closely with its effect on residential service.

The normal residential load curve is divided into three peaks, the morning, noon, and evening peaks, the average morning peak in percentage of the evening peak ranging from 70% in September to 80% in January and February. The peak load of the house heating business occurs around 7:00 a. m., and at the time of the evening system peak has dropped to 80% or less of the morning maximum. In the 1923-24 heating season, the average evening hourly peak on the entire system was, in September, 940,000 cubic feet, and in January, 800,000 cubic feet, a difference of 140,000 cubic feet per hour. The average morning peak in January was 640,000 cubic feet.

A load of 140,000 cubic feet of the heating business added to the evening peak would mean 140,000 divided by 80%, or 175,000 cubic feet per hour added to the morning peak. The addition of 175,000 feet per hour to the January morning peak of 640,000 cubic feet per hour still leaves a margin of 125,000 cubic feet between the January morning peak and the September evening peak. As we have found that, due to diversity, the ratio of the individual demands to the aggregate demand of a group is 85%, then the total demand in house heating which could be added to equalize the January and September evening peaks would be 175,000 divided by 85%, or 206,000 cubic feet per hour. This equals 590 customers of an average demand of 350 feet per furnace.

From the above figures, it is seen that the addition of several hundred house heating customers need cause no alarm in spite of their adverse seasonal load characteristics. This business is now being taken on at the regular residential rate, which averages between 90 and 95 cents

per M. At this rate, a dozen customers were served during the 1923-24 heating season, and forty more were added during the winter of 1924.

So far no special rate has been made for this class of business, as we are not yet convinced that a rate much under 90 cents could be made, if additional water-gas plant capacity should be required to supply it. Had the rate been dropped very much under 90 cents, we might have added a large volume of business which would have required that we later increase the rates to a point which would at least equal our present residential rates, and we do not wish to be in the position of making a reduced rate which later would have to be increased.

A. G. A. OFFERS SERVICES TO TORNADO SUFFERERS

WHILE the Red Cross and other agencies were rushing men and supplies to the stricken tornado zone, the American Gas Association, through its president, H. C. Abell, and secretary-manager, Alexander Forward, offered the engineering facilities of the Association to help restore utility services in the affected area.

The following telegram was sent on March 20th to the secretaries of the Illinois Gas Association, Indiana Gas Association and Missouri Association of Public Utilities:

"With profound concern for sufferers from storm in your territory, the American Gas Association tenders services of its engineering, technical and any other headquarters resources in restoration of public services."

R. V. Prather, secretary of the Illinois association, in acknowledging the message reported that only one gas company in the state, that at Murphysboro, had been seriously damaged. There was considerably less damage to public utility property than had been first believed.

McCarter Medals Awarded

NINE gas company employees will receive awards of the McCarter Medal for resuscitation work this spring. Recommendations to this effect were passed at a recent meeting of the Executive Board, and the medals will be presented on appropriate occasions during forthcoming months.

In addition to the medals, certificates will be presented to eleven employees who rendered assistance in rescuing victims of gas asphyxiation.

The first of the awards was officially made at the convention of the Illinois Gas Association, which was held in Chi-

porch, where he was found by Mr. Beardsley, who, assisted by William Richmond and W. E. Stout, both gas company employees, worked on him for nearly three quarters of an hour.

The victim had fully recovered by the end of the day and will not suffer any permanent disability as a result of the accident.

Two other medal awards will be presented during this month at the annual Eastern States Gas Conference in Newark, N. J., April 22-23.

Since the awards are to be made in the territory of the Public Service Electric



RECIPIENTS OF McCARTER AWARD

Arthur G. Cook
Counties Gas & Electric Co.

John P. Hanlon
U. G. I. Co.

Willis M. Beardsley
Central Illinois Light Co.

cago on March 18 and 19. Presentation of the medal was made during the meeting to Willis M. Beardsley, 812 S. 10th Street, Pekin, Illinois, who is a local manager of the Central Illinois Light Company.

The victim, a street foreman employed by the same company, was connecting a 2" main to a 4" steel pipe in a three and a half foot ditch and failed to bag off one of the three lines feeding gas to this point.

Rendered unconscious by escaping gas, he was eight minutes without help before resuscitation by the Schafer prone pressure method was begun.

Workmen carried him to a nearby

& Gas Corp., of which Thomas N. McCarter, the donor, is president, the presentation will be performed by Dudley Farrand, vice-president of that company.

Recipients of the medal at this time will be John P. Hanlon of Philadelphia, gas fitter in the employ of the United Gas Improvement Co., and Arthur G. Cook, main foreman of the Counties Gas and Electric Co., at Norristown, Pa.

Mr. Hanlon was assisted by Robert Conner, an inspector of the U. G. I. Company, and Mr. Cook by Generoso Scandone and Pasquale Celatta.

The first victim was a carpenter at work making alterations to a building, and was asphyxiated by the fumes from

a metal drying pot, used for drying plaster. Artificial respiration was unnecessary in this case and he was revived within twenty minutes after resuscitation was begun.

Mr. Hanlon had attended a first aid class of the U. G. I. Safety Division a few days before the accident occurred and was therefore able to apply his newly gained knowledge in a practical manner.

The victim suffered no serious ill effects beyond a slight laceration of one ear when he fell.

Mr. Cook also revived his man within a few minutes after he had been rendered unconscious. In this case, the victim, a foreman in the Distribution Department of the Counties Gas & Electric Co., was repairing the gas service in a deep trench when he was overcome. While one of the repair gang massaged his arms and legs and the other kept the air passages free, Mr. Cook used the prone pressure method with success.

As in the other cases, the victim suffered no permanent injury and was able to resume work almost immediately.

Other medal awards to be made shortly will go to Owen L. Dickinson, Pacific Gas & Electric Co., Fresno, Calif., William A. Bahr, Pacific Gas & Electric Co., Kentfield, Calif., James E. Fields, Pacific Gas & Electric Co., Fresno, Calif., Louis Maurice Gagnon, Providence Gas Co., Providence, R. I., Earl Welch, Northern Indiana Gas & Electric Co., Lafayette, Ind., and Theodore Suchomel, Cedar Rapids Gas Co., Cedar Rapids, Ia.

"Assistance certificates" will be given to Ray Kutter, Pete Salti, Daniel Kirkpatrick and Horace Oftedal of Fresno, Calif., Alfred E. Englebright, Kentfield, Calif., and James Hill Sloan, Auburn, R. I.

Further details will be given when the remaining awards are officially made.

PROPOSED FOR RE-ELECTION



Philip H. Gadsden

THE NAME of Philip H. Gadsden, vice-president of the United Gas Improvement Company, Philadelphia, Pa., and president of the Charleston, S. C., Consolidated Railway and Lighting Company,

has been proposed for re-election as a director of the Chamber of Commerce of the United States of America, representing District No. 2. The election will be held at the annual meeting of the Chamber in Washington, May 20-22.

Mr. Gadsden is a former director of the American Gas Association and is now a member of the Advisory Council. He has been president of the Southern Gas Association, of the Eastern States Gas Conference and of the American Electric Railway Association. He has also been extremely active in the work of the Philadelphia Chamber of Commerce and the Pennsylvania State Chamber of Commerce. He has been chairman of the Committee on Federal Taxation of the Joint Committee of National Utility Associations, the Emergency Committee of the American Gas Association, and wherever his services have been requested.

EXHIBIT XL 1,584

Gas Code to Prevent Fatal Auto Crashes

WASHINGTON, Feb. 26.—(United Press.)—Rules forbidding use of unauthorized attachments with gas burners are among the provisions of a safety code for the use of gas, now being prepared under the auspices of the Bureau of Standards of the Department of Commerce and the American Gas Association.

Reproduced Without Comment

"Public Service is a Public Trust"

A Public Servant Gives an Account of Its Stewardship

EVERY year the Consolidated Gas, Electric Light and Power Company of Baltimore outdo themselves in the preparation of the company's year book and annual report.

The 1925 edition, of which the accompanying drawing is only a sample of the many attractive features, is unquestionably the finest, both in appearance and in the quality of its information, that the Baltimore company has ever published. It is well up on a level with the best in publicity that the gas industry has produced in recent years.

Probably the most practical way of reviewing the book is to let it speak for itself.

"Public Service is a Public Trust" is the suggestive title which Arthur W. Hawks, Jr., its editor, has given his company's publication.

"The avowed purpose of the company," he says in his foreword, "has been to become the strongest and most useful servant of the people in building a greater Baltimore. Its great quest, during these fifteen years, has been for ways and means to serve more and better. This primal purpose of creating wealth for Baltimore has been the keystone in the arch of its relations with the public. It was made so because, while the company expected to fulfill the obligations it assumed

as a public servant, it saw in another service, above and beyond its ordinary duties, an opportunity for the progress and prosperity of Baltimore.

"Such a conception is not philanthropic nor is it altruistic. It is sound business vision carried out for profit, the profit of the investors in the company's securities as well as of the community. Both have prospered. Both have achieved prestige."

In the subsequent pages we are made to realize how successfully this conception has been carried out.

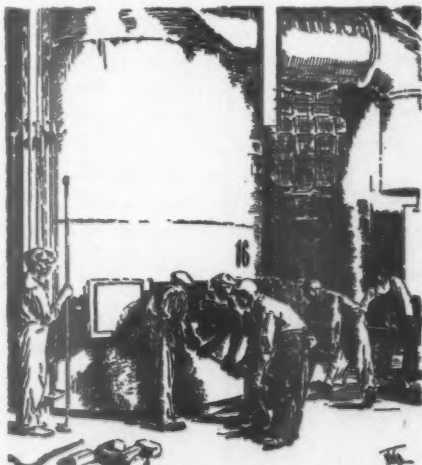
Approximately 7,548,276,000 cubic feet represent the increase in the amount of gas generated for Baltimore—10,680,745,000 cubic feet in 1924; 3,132,469,000 cubic feet in 1910.

Seven thousand, six hundred and fifty-eight represents the increase in the number of customer-stockholders of the Consolidated Company; in 1924 one in every 25 customers owned stock, a total of 8,042; in 1910 there was practically no such thing.

One million four hundred and nine thousand, seven hundred and nineteen dollars represents the increase in the annual amount paid in dividends to the stockholders of the company.

The reader is also told something about the difficulties of public utility management.

"While the reve-



Generator House of Spring Gardens Gas Works

nue of the Consolidated Company has increased to about five times," says the book, "the taxes paid by the company have increased to about eight times."

Dividends paid in 1924 amounted to \$2,085,323.65 while the total tax bill was \$2,446,052.91. In other words, the City, State and Federal Governments receive nearly half a million dollars more in taxes from this company than its stockholders do in the form of dividends.

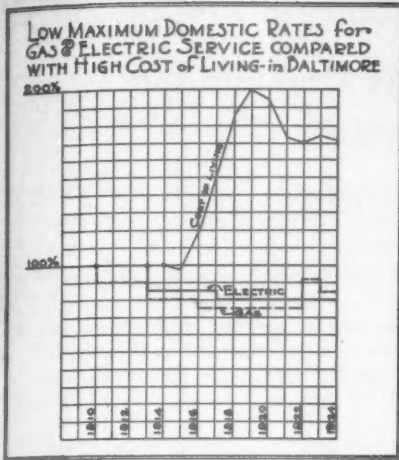
Meanwhile, Baltimore customers are being educated in public utility economics by means of customer ownership.

Baltimore's gas company has for years been one of the most enthusiastic missionaries for industrial gas.

The industrial and commercial business represented 25.2 per cent of the total gas sales by the Consolidated Company last year—2,586,843,600 cubic feet. The increase in the use of gas by the large industrial customers was 21 per cent over 1923.

Following are some of the classifications which show the diversified nature of the increased usage of gas and their connected load:

Industries	Number of Customer Locations	Connected Load Cu. ft. per hour
Automobile Rebuilding	100	32,598
Bread Bakeries	155	43,300
Cake Bakeries	12	5,088
Ice Cream Cone Bakeries	7	12,500
Beverage Manufacturers	41	11,268
Apartment Houses, Schools, etc.	83	16,320
Ceramic Works	19	54,750
Clothing Manufacturers (Woolen)	198	60,112
Clothing Manufacturers (White Goods)	72	19,100
Coffee Roasters	11	11,144
Peanut Roasters	2	2,500
Confectioners	76	54,168
Hotels and Restaurants	120	219,996
Hospitals and Institutions	60	85,000
Laundries	53	6,270
Foundries, Machine Shops, etc.	204	272,346
Packers	96	42,731
Paints, Oils and Varnish	16	8,850
Paper Boxes	24	64,620
Newspapers	12	38,032
Printers	46	9,500
Tin Decorators	6	65,204
Tin Can Manufacturers	18	49,000
Woodworkers	47	18,240
Miscellaneous	110	39,840
Total	1,588	1,242,477



Gas 19% Cheaper—Cost of Living 73% Higher Than in 1910

Baltimore's growth is nowhere revealed more graphically than in the enlargement of the electric and gas plants made necessary to meet the demands of the city's phenomenal development.

The gas distribution system was increased during 1924 by laying 52 miles of main, breaking all previous records in the company's history. The largest have a diameter of four feet. The number of house services laid was 6,161.

The company now has in service 979 miles of gas main, 992 miles of gas service pipes and 181,059 gas meters. All of these are owned by the company and maintained in accurate order by it.

The company has increased the customer's demand for both gas and electric service by the application of primary and secondary rates. The report says that the primary rates applying to only a small part of the consumption are becoming of less consequence to the users of the service.

Analysis of the application of the secondary schedules of the gas business shows that the maximum number of gas customers who availed themselves of sec-

ondary rates during 1924 was 41,134 domestic and 3,036 commercial.

Nearly half of the gas sold during 1924 for domestic and commercial consumption was billed at both primary and secondary rates.

During 1924 the average amount of gas used per domestic customer was 49,993 cubic feet. The consumption per customer has nearly doubled since the time the secondary gas rates were put into effect in 1916.

Because of the reduced rates in effect during the full twelve months, the return on the property was \$885,098.27 less than during 1923.

Revenue from electric operations decreased \$333,755.92, or 2.50 per cent from the previous, and sales of electricity decreased by 20,985,168 kw.h. or 3.48 per cent. Revenue from gas decreased \$174,895.78 or 2.06 per cent. However, it is worth noting that the demand for gas increased during the same period by 267,370,300 cubic feet of 2.67 per cent.

INDUSTRIAL and commercial gas consumption in Baltimore registered a gain of 10.4 per cent in February, as compared with February, 1924.

TOTAL TAX DILL

1924

\$2,446,052.91

DIVIDEND CHECKS

1924

\$2,085,323.65

Where Government Gets the Big End

The Individual Gas Man and the Association

By ALEXANDER FORWARD

It is quite superfluous to say that this is the age of organization; the fact is impressed upon all of us at every touch in our business and private lives. He who is not in closest possible contact with others in his own profession or calling and does not keep himself familiar with its developments and its achievements cannot hope to be abreast in the race of life.

When the American Gas Association is not as useful as it could be to the average individual gas company employe, it is often because such employe is not a member. The Association sends its MONTHLY and its occasional Service Letter to all of its members. Naturally, the company representatives desire to keep these publications close at hand where they may be referred to at any time, and thus they do not get into the hands of non-members.

Many of our companies, realizing this, are careful to encourage the maximum possible number of individual memberships within their ranks. In this way they see that their men and women employees keep step with the advancement of the industry, with the thoughts of its leading men and with the work of its committees. Some observation along this line has led to the conclusion that there are a good many gas company employes who are unfamiliar with these publications and there are others who do not see them until weeks and months after they are published.

Again, railway regulations now require actual membership in the Association on the part of each individual who uses a reduced rate certificate in attending the annual convention. This is a matter of no little importance to a good many people and to a number of companies.

The Association makes no profit from its individual members since their dues are consumed in the cost of the service rendered. We are, however, anxious to have a large body of active gas men on our list. It is believed that these considerations will appeal to gas and manufacturer company executives and to the heads of departments and result in definite encouragement on their part to their employees to apply for membership in the Association.

"We want our people to be members of the A. G. A." says one leading executive. "Apart from the fact that they become more efficient, it helps wonderfully in company spirit."

Recent Improvements in Gas Distribution and Transmission

By H. Y. CARSON, American Cast Iron Pipe Co., Birmingham, Ala.

THIS paper will touch on points that may be of interest to gas engineers and the writer will offer information dealing with the following topics:

1. Improved methods of manufacturing cast iron pipe, including centrifugal processes.
2. Better joints for mains and services.
3. Suggestions for lowering first costs and maintenance costs by adopting the duplex or double pipe system of distribution.

Cast iron pipe is one of the recognized standard materials for gas distribution systems, and improved methods of installing such materials are of great importance to gas men everywhere.

As there are many who are interested in the reasons for the superior corrosion resistance of cast iron pipe over other materials, some of the information on that subject may profitably be reviewed.

According to the mechanical theory* of rust on wrought iron, steel and cast iron, the latter material, when exposed to corrosion underground requires no artificial coating, because generally it rusts on the surface in such a way that it does

not flake off or exfoliate. Rust on cast iron pipe, it has been found, enters into the pores of the metal and stops up the openings between the crystals in such a manner that the elements of corrosion are, after a time, practically checked. In the rolled steel or wrought iron pipe, the crystals of iron during the manufacturing process have undergone a destructive deformation which aligns them into definite laminae with respect to the surfaces that are exposed to corrosion. The three cuts, figures 1, 2 and 3, illustrate very well these differences in the mechanical structure of cast iron, wrought iron and rolled steel. The best supporting evidence of the influence of structure upon the rate of rusting and pitting is furnished by the corrosion resistance of cast steel as compared with the same cast steel after it passed through the rolls.

Improvement in Pipe Foundry Practice

The most striking development in the cast iron pipe industry has been the manufacture and introduction of centrifugally cast pipe. It is of interest to know that the cast iron pipe business is subject to very keen competition, and this is ac-

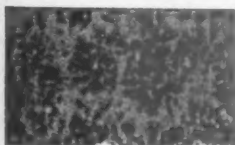


Fig. 1

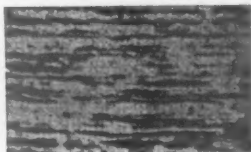


Fig. 2

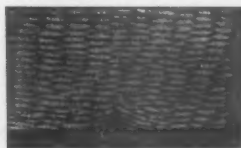


Fig. 3

1. Photomicrograph of Cast Iron Showing Open-Grain Structure between Crystals. 2. Wrought Iron Showing Laminae Structure Which Exfoliates under Rust Action. 3. Drawing of Rolled Steel Pipe, Much Enlarged, Showing Surface and Longitudinal Sectional Structure With a Typical Pit.

*Paper by R. C. McWane and H. Y. Carson. Proc. Amer. Foundrymen's Association—Volume XXXIV, 1916, pp. 593 to 601.

centuated by the heavy fluctuations in the production of cast iron pipe because of the alternation of bad and good times. These conditions have tended to put out of business all those pipe foundries that were not advantageously located for low production and transportation costs. The effort on the part of pipe foundries is sure to continue for many years to still further lower the production cost of cast iron pipe. Progress is being made in this direction, but at present the per ton cost of centrifugally made pipe is not materially different from regular sand cast pipe, and in order to be able to sell the former at a lower cost per foot, it is being made with thinner walls.

It is natural that gas men should watch these developments with the keenest interest, and it is significant of real progress also that the pipe manufacturer is studying with just as keen interest the field problems of those who use pipe. Likewise, the modifications in our rapidly developing urban existence, with cities spreading almost to the country, and with the tremendously growing demand for gas, calls for careful study on the part of all who are concerned.

The Problem of Higher Pressures

With the gas industry striving for greater efficiency in all departments, the problem today with most gas distribution systems that have been operating for several years is to increase their capacities. The chief obstacle in the way of increasing the distribution piping capaci-

ties is the tearing up of the paved streets which have been laid over the top of the mains. The mains when laid were probably thought to be of adequate size for any demand, but with the popular advent of gas for water heaters and house warming furnaces, the peak hour demand is growing to such proportions that to assume even the maximum present day gas consumption figure is not safe for the design of future piping systems. It is desirable, moreover, to avoid the laying of mains and services in non-accessible locations, such as under street surfaces.

If new mains cannot, without serious difficulties, be laid, the alternative is the raising of pressure in present mains. But, of course, this involves the placing of individual house regulators on each service line, because the gas equipment now placed in houses cannot operate at pressures above a fraction of a pound per square inch. However, if individual regulators are put on each service line, the pressures may be raised practically without limit.

Here again very serious difficulties are met because the ordinary joints in the mains and serv-

ices will not, without some alteration, withstand the increase of pressure. Hence it seems wise that future gas mains and services should be designed for higher pressures. This last remark is especially applicable to new installations and to the extension of existing systems into new districts. Perhaps, in the future, the mains will be required to convey gas at pressures around 60 pounds per square



Fig. 4. Showing How Pipe 30 Feet Long Is Loaded at One of the Birmingham Foundries.

inch. This desired end can be accomplished, if the work is carefully carried out, and, while the actual costs for the high pressure system are more than the older low pressure systems, doubtless better designed systems will pay bigger dividends. The writer believes that better designs are now available.

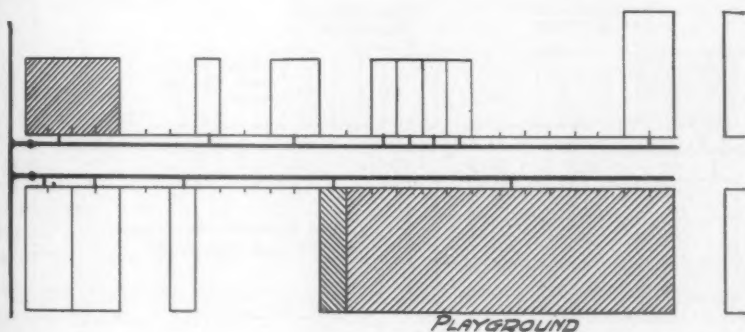
Several widely different types of joints for cast iron pipe have been carefully investigated at Birmingham, Alabama, and some have been found to be tight at high pressures. Moreover, these joints have been found easy to make.

Instead of discussing the separate elements which go to make up the improved underground piping layout, perhaps the ideas will be much clearer to the reader if we simply trace through from the pipe foundry to the finished distribution or transmission system, the various steps that should insure perfection. There are

at least three distinct points to be understood and any gas man may work out a specification for his requirements if he understands these points clearly.

First, the pipe for high pressure systems should be tested with air pressure both at the foundry and in the trench. If this test is properly carried out as an addition to the usual hydrostatic test at the foundry of 300 pounds per square inch, full assurance may be had of the bottle-tight performance of the pipe in the finished line.

The air test at the foundry is accomplished in a special press where the pipe is capped on each end by means of heavy rubber disc gaskets held tight from the endwise thrust of an air-operated plunger, and then the pipe is lowered or entirely submerged under water where any minute air leak may as readily be ob-



TWO MAIN SYSTEM - SERVICES LAID AS NEEDED



Fig. 5. Sketch Illustrating Typical Two-Main System of Gas Distribution for Residential Sections.

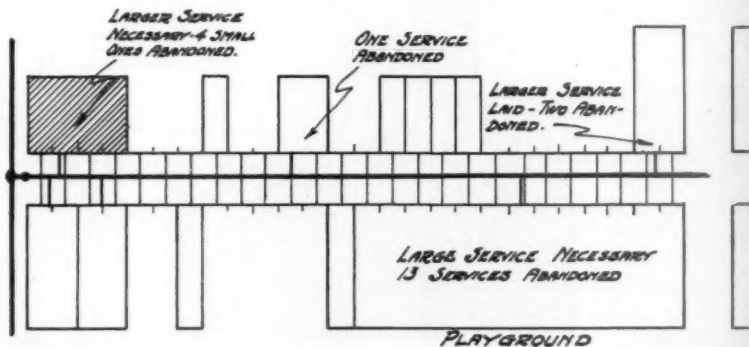
served as with the ordinary air testing of automobile inner tire tubes under water. The extra cost for testing pipe with air at the foundry is nominal.

Second, a recent development of the trade is to have cast iron pipe shipped in lengths of 30 feet to 40 feet (see Fig. 4). The pipe may, however, be assembled into as long lengths as desired at the unloading yard before distributing to the ditch by bronze-welding one or more standard 12 foot or 16 foot lengths together. Then, by lowering these into the trench and bronze welding these sections, any desired length of continuous pipe may be obtained. The next step is the joining of these long sections together by means of a special bell and spigot joint, which is described later.

There is much greater advantage all around if field welding is eliminated and pipe in bell and spigot design is handled

to the ditch in approximately 30 to 40 foot lengths. Proper provision for expansion and contraction is thereby secured. The cost of the work may be lowered somewhat if field welding is eliminated, as experience indicates that, unless a skilled and efficient organization is maintained in field welding, it will generally cost more than the same work does at the foundry. Furthermore, in cities where many fittings must be placed at street intersections, and the pipe line cannot always follow a true alignment, it becomes very convenient to speed up the work with such a simply constructed joint detail as the bell and spigot type. One of the essential improvements herein discussed is the new type of bell and spigot gas joint that is now possible to make for both high pressure systems and low pressure systems.

The third point covering recent developments is that mains and services should



SINGLE MAIN SYSTEM - SMALL SERVICES LAID TO EACH LOT PRIOR TO PAVING. MANY ABANDONED - STREETS OPENED TO INSTALL LARGER ONES - ALL MAINTAINED FOR YEARS PRIOR TO USE.



Fig. 6. Sketch Illustrating Typical One-Main Gas Distributing System Showing Some Disadvantages as Compared to System Illustrated by Fig. 5.

be kept out of the street proper, as per suggested plan, given later, of a duplex pipe system, which plan, so far as the writer knows, originated with Mr. T. F. Wolfe, a prominent engineer of Chicago.

Bronze-Welding Cast Iron Pipe

Bronze-welding cast iron pipe is proving to be practical. Developments up to the present indicate, however, that its application can best be accomplished at the foundry by shipping the pipe in long lengths and jointing in the field with improved joints described later.

Table 1 shows the approximate quantities of materials and labor required to make bronze welded joints on cast iron pipe, when allowance is made for delays and waste of time and materials. From these data costs may be computed if unit prices are known:

molten Tobin bronze should be applied at the lowest temperature (about 1650° F.) at which good bonding of the two metals will result.....

"The operator should always be careful to maintain a neutral welding flame. There should be no excess of oxygen as this will tend to oxidize the zinc content of the bronze, which will not only weaken the weld, but give off zinc oxide fumes, which are very disagreeable to the operator..... It is essential that the welding temperature be kept low....."

The value of a rubber ring in a bell joint has been ably described in the *Gas Journal* by Mr. Walter Hole,[†] of London, England, where he says:

"In considering this subject, two things must be kept clearly in mind. The first is that rubber is practically incompressible. Taking the Oiffon ratio of 0.5 for water and other incompressible substances, the ratio for rubber is 0.49. On the other hand, rubber cannot take up moisture or gases without distention, but when used for jointing gas mains a rubber ring is so rigidly encircled as to be incapable of expansion. This is most important..... The mere fact of its being rigidly held in this

Table No. 1 Showing Average Quantities of Bronze Welds For C. I. Pipe

Pipe Diameter	2"	3"	4"	6"	8"	10"	12"
Av. thickness weld	0.11"	0.12"	0.12"	0.13"	0.14"	0.16"	0.18"
Width of weld	0.75"	0.80"	0.90"	1.00"	1.15"	1.25"	1.35"
Tobin bronze—lbs.	0.20	0.50	0.70	1.18	1.96	2.90	4.20
Flux—pounds	0.01	0.03	0.04	0.06	0.08	0.13	0.20
Oxygen—Cu.Ft.	2.2	6.25	9.30	15.70	26.0	38.6	55.8
Acetylene—Cu.Ft.	2.0	5.63	8.37	14.13	23.40	34.74	50.22
Welder time—min.	10	25	45	60	75	85	100
Helpers time—min.	7	20	25	35	45	55	65

Quoting from one of the articles* on "Bronze Welding Cast Iron Pipe," we have the following information:

"It is essential in this welding as in all good welding practice to have the pipe surface clean and all oxides or other foreign matter removed from the area to be welded.

"Butt the plain ends of two pipes together and tack weld in two or three places. Proceed to weld around the pipe in one direction until the weld is completed. The abutting pipe ends should be heated to a dull red color and a small quantity of approved bronze welding flux added, after which the

way prevents absorption of moisture or gas, as this can only take place by means of distention. It has been proved that, even if absorption and expansion are allowed to occur, the action is purely physical and not chemical and is not deleterious to the rubber. But, when absorption becomes physically impossible, as in a rigidly held joint, assurance becomes doubly assured; and a properly vulcanized rubber ring may be considered absolutely immune from deleterious action."

Mr. Hole has brought to light some important points of value to the gas indus-

*See Gas-Age Record of May 31, 1924, article on "Bronze-Welded Cast Iron Pipe Joints" by H. Y. Carson. See *Gas Journal* of Nov. 21, 1923, article on "Durability of Rubber for Jointing Gas Mains" by Mr. Walter Hole. Also Gas-Age Record of January 31, 1925, p. 149.
[†]Ditto.

try, and if his thoughts on rubber rings are combined with recent improvements, such as welding, a bottle-tight gas main is possible. At the same time, proper provision for expansion and contraction is provided.

It will also prove to be a decided advantage to use rubber rings in all the joints made at the fittings, such as tees, crosses, bends, etc. This obviously provides proper measures for expansion and contraction features at some of the points where it is most needed. Moreover, standardized fittings may be used interchangeably for either high pressure and low pressure gas systems, as this type of joint is equally efficient in either case.

The Two-Pipe Distribution System

A final word about the most suitable plan for distribution systems is appropriate. The increased cost of pavements, coupled with the tendency towards wider streets and roads, and also the tendency

for higher pressures for distributing gas, calls for an altogether different plan or layout of underground pipe systems. The old method of laying a single main at or near the center of the street (see Fig. 5) ceases to be economical, and the use of two mains, as illustrated on sketch Fig. 6, becomes not only cheaper in first cost as seen from Table 2, but considerably cheaper in cost of maintenance after installation. The writer has been much impressed by the printed discussions of engineers who favor the two-main distribution system, both for water and for gas, and he predicts that its use will be as rapid as has been the call for improved pavements.

In a paper of this length one can merely suggest the recent improvements in distribution that are now available; but the writer has attempted to point out a combination of things that will lead to reasonable first cost and lower maintenance cost.

TABLE NO. 2
COMPARING DATA ON SINGLE-MAIN SYSTEM AND TWO-MAIN SYSTEM OF
GAS DISTRIBUTION

(Assume typical city block, 660' long; street 100' wide; pavement 40' wide; width of lots 25'.)

ITEM OF WORK INVOLVED	COST	
	FOR ONE-MAIN SYSTEM	FOR TWO-MAIN SYSTEM
FOR TWO BLOCKS:		
1320' of 6" Pipe installed @ \$1.90	\$ 2508.00	
2640' of 6" Pipe installed @ \$1.90		\$ 5016.00
2—6" Valves installed	50.00	
2—Brick or Concrete basins under pavement	110.00	
4—6" Valves installed, including valve boxes in parkway		120.00
104—1½" Taps installed @ \$3.00	312.00	312.00
2288'—1½" Galvanized Pipe @ \$0.22	503.36	
2288'—Labor, excavating, back-filling and laying pipe @ \$0.75	1716.00	
104—1½" Curb Cocks and Boxes installed @ \$3.50 ..	364.00	364.00
8—2½" services laid, including repairs to pave- ment to replace 40 abandoned services @ \$42.00	336.00	
Total Cost, Exclusive of Maintenance	\$ 5899.36	\$ 5812.00

Water Power or Coal?

ACCORDING to Curtis, the ammonia now available from coke ovens and gas works is about one hundred and thirty thousand tons of nitrogen," says Alonzo Englebert Taylor, in a recent issue of *The Saturday Evening Post*.

"Only a part of the ammonia set free in the coking of coal or in the manufacture of gas is recovered," he writes. "During the war, by-product coke ovens were installed to a notable extent, in part in response to governmental appeal, and possibly to an extent not yet justified by production costs in the accounting of the coke industry. A great deal remains to be accomplished in the direction of increased efficiency in the recovery of by-products of cokeries. With every decade has come a relative lowering of the cost of recovery, and further achievements may be anticipated.

"There is, however, clearly a limit to expansion with lowering of costs, dependent on characteristics of coal, location, transportation costs, labor charges and expense of installations. But just where this line is, and how far down lies the point in the cost scale, is not known. Senator Ladd rejects by-product ammonia largely on the ground of monopoly:

"...but the country knows only too well how a coal strike can paralyze transportation and industry. Shall we deprive our future fertilizer industry of water power and make agriculture itself dependent

upon the good grace and tolerance of the coal operators and their miners?"

"We come now to the assumption that the fixation of atmospheric nitrogen must be secured through electric energy. For one reason and another, political and otherwise, fixation of atmospheric nitrogen and electricity seem tied together in the American mind. In one of the Aldred Lectures for 1924, F. G. Cottrell, director of the Fixed Nitrogen Research

Laboratory, United States Department of Agriculture, remarks:

"Thus the public came naturally, and correctly enough in those early days, to think of nitrogen fixation as necessarily dependent upon the development of large new water-power projects. In the meantime, research and development have vastly altered the situation, but the public mind has not kept pace with these changes, and this has naturally been reflected by those responsible for guiding our industrial and national policies.... In another decade or two the public may have quite correctly come to think of



Interior of a Haber Plant. This Factory, of the Badische Anilin & Soda Fabrik at Merseburg, Germany, is Said to Produce More Ammonia Than All American Coke-Oven Works Combined.

nitrogen fixation as even more closely connected with coal and the coke oven industry than it now associates these undertakings with water power.'

"A layman might read the entire discussion of Senator Ladd in The Saturday Evening Post without learning that there was any other good method of fixing atmospheric nitrogen than with the use of electric energy. Senator Ladd speaks of Germany having emancipated herself from the fertilizer monopoly of Chile, but fails to state that this emancipation does not rest on fertilizer produced through electric current, but rests on the chemical method based on coal.

The Method of the Future

"According to available technical experiments, the nitrogen-fixation method of the immediate future is that of Haber, with modifications and anticipated improvements. This is a method of chemical synthesis, in which nitrogen and hydrogen are compressed in the presence of a catalytic agent, with the production of ammonia. The nitrogen is taken from the air, the hydrogen from coal gas or from water.

"The most favorable conditions of pressure are not yet clearly defined; one group of experimenters is working away from high pressures, another in the direction of high pressures. The question of the best catalyzers and promoters is not yet solved. The technical difficulties in the construction of large bombs capable safely of holding the high pressure have apparently been solved, and improvement in the efficiency of compression pumps is no longer a major issue. The chief cost difficulties in the method revolved about the purification of the hydrogen. Practically 60 per cent of the present cost of ammonia by the Haber method arises in the cost of purification of the hydrogen.

"A tremendous volume of uncombined hydrogen is at present burned merely as fuel in the by-product gases of cokeries, and the costs of recovery would be little more than the cost of purification. In any one of a dozen of our large coke-oven plants more hydrogen thus goes practically to waste merely as a cheap fuel than is represented in the forty thousand tons' annual capacity of the present cyanamide plant at Muscle Shoals.

"Despite the cost of purification of hydrogen from coal, the cost of producing ammonia by the direct method has apparently been brought down to a figure so low that no known electric fixation of atmospheric nitrogen in the continental United States can deliver commercial fertilizers at a comparable figure.

"Notable improvements in the purification of hydrogen, with lowering of costs, may be confidently expected, through chemical means as well as through liquefaction and distillation, with the engineering application of known physical laws to low temperatures. Curtis states that 'There is a general consensus of opinion in this country that the direct synthetic ammonia scheme of nitrogen fixation offers greater promise of cheap nitrogen than any other process at present, and there have been a number of estimates made which indicate a price of about seven cents per pound of fixed nitrogen secured by this method.' Two years ago, in Germany, Haber made to the writer price predictions materially lower than this figure.

"The ammonia secured through the Haber method may be readily oxidized to nitric acid, and this nitric acid then combined with ammonia to form ammonium nitrate, a concentrated fertilizer—or explosive component—whose quali-

ties and scope in mass operations are as yet undetermined.

"No matter how strong the argument for fertilizer, this does not need to be nitrogen fertilizer fixed by electric power. Neither the amount nor the cheapness of nitrogen fertilizer depends on electric power, since in all likelihood the cheap supplies of the future will be secured from coal. Senator Ladd quotes a prominent engineer as saying:

"This art is changing so fast that you can hardly follow it."

"Yes, but apparently the art that is changing so rapidly is the art of the chemical synthesis, not the art of the electrical method.

"There are several alternative ways, under governmental control or under lease, as may be thought most desirable, to dispose of Muscle Shoals power. One might employ the primary power for exclusive use of nitrogen fixation and sell the product on a cost-plus basis. One might employ the primary power for preparation of phosphoric acid and sell it on a cost-plus basis. One might use the power for all manner of metallurgical transformations and chemical syntheses, regard the fixed nitrogen that might incidentally be made available in the course of these manipulations as a waste product, and turn it over to agriculture free of charge.

"The fourth course would be to employ the current to the highest economic advantages of the Southeastern states and erect Haber plants at locations of cheap coal for the synthesis of ammonia. Preparedness for war and subsidy for agriculture are equally possible with all four methods. The decision ought to be an engineering decision, since our agriculture can hardly be advanced, in the long view, by unsound engineering. But the program should not be an irrevocable



Ammonium Sulphate Recovery Apparatus of the Seaboard By-Product Coke Co.

policy over a long term of years. The program should be one of development, taking advantage of technical advances—a policy of growth, not a formula."

LOWER B.T.U. VALUE APPROVED

THIS ORDINANCE became effective on February 24:

The Council of the City of St. Paul does ordain:

That the St. Paul Gas Light Company shall hereafter furnish gas to the City of St. Paul and its inhabitants, of a heating value of not less than 530 British thermal units per cubic foot of gas, and not to exceed 570 British thermal units per cubic foot of gas, with a monthly average of not less than 550 British thermal units per cubic foot of gas, and of an illuminating power of not less than four candle-power standard; provided, however, that the Council may at any time hereafter, by ordinance, require the said St. Paul Gas Light Company to furnish gas of a higher or lower heating value standard and candle-power standard, whenever in the judgment of the Council conditions may warrant an increase or reduction in such standard.

John Hawley Taussig

THE many friends and associates of John Hawley Taussig were shocked to learn of his most unexpected death on March 2 following an operation in the Chestnut Hill Hospital, Philadelphia. He had played so vital and important a part in the affairs of the industry and the Association that it is difficult to conceive of these activities proceeding without his virile personality.

In later years Mr. Taussig was most actively identified with the work of the Carbonization Committee, having served as chairman of that committee in 1922, and having acted as a member of the Committee continuously since the inception of the Association. He was also very active in the technical work of the former American Gas Institute and the American Gas Light Association.

Mr. Taussig was a graduate of Cornell University in 1897, leaving there to enter the employ of the Philadelphia Gas Works as a cadet engineer. He filled various positions in the Philadelphia Gas Works, leaving in 1901 to assume the position of superintendent of the Market Street Works of the Essex Hudson Gas Company, Newark, N. J. From this position he returned to the United Gas Improvement Company as assistant engineer of tests, later being transferred to the Construction Department as engineer of design. Here he made many improvements on the U. G. I. gas manufacturing apparatus and developed new designs. The U. G. I. vertical retort system, U. G. I. pressure producers, U. G. I. waste heat boilers, meter dipping and the U. G. I. automatic control are among the achievements that may be accredited to his inventive mind and skill. He recently was awarded the Edward Longstreth Medal by the Franklin Institute for his gas apparatus inventions.

When the U. G. I. Contracting Company was organized, Mr. Taussig was appointed gas engineer of the Sales Department, which position he occupied at the time of his death.

The following resolution was adopted at the meeting of the Managing Committee of the Technical Section held in Chicago, March 18, 1925:

Resolved: That, in the death of our fellow member, Mr. J. Hawley Taussig, the gas industry has suffered the loss of a most able contributor to its technical progress and development, and his associates in that work desire to record their deep sense of sorrow, not only in the loss of a constructive force in the industry, but in the passing of a friend whose genial and virile personality had endeared him to us all.



John Hawley Taussig

Rewards of Home Service

By ADA BESSIE SWANN, Chairman of the Home Service Committee



Ada Bessie Swann

WITH this issue of the American Gas Association MONTHLY, Home Service is to take its place with the regular monthly programs of the industry.

It is a pleasure for me, as chairman of the Home Service Committee, to send this word of greeting to the members of the Association.

To each and every member having a Home Service Department may I extend my best wishes and remind you all that I am anxious to become better acquainted with you and your work.

To those who do not have Home Service Departments, I send the same good wish and hope you will soon be sharing this most interesting work with us.

Your Committee is striving very diligently this year to bring the work of Home Service Departments in the industry into a more unified effort, so that the work of the individual company will take its place as a part of the whole, and home service work in our industry will be a national factor.

The Home Service Department of a gas company has two major objects:

First, the increasing of good will and friendship for the company on the part of women customers.

Second, the increasing of sales, of both the gas and the appliance.

In other words, the building up of steady monthly increase in gas consumption is the goal.

This objective may be attained in various ways. Many individual companies have very original and effective methods of accomplishing it. The principal meth-

ods in use may be classified as follows:

I. Lecture demonstrations to women's organizations.

II. Cooking classes.

III. Demonstrations of appliances in offices.

IV. Individual instruction in the home of the customer.

V. Radio broadcasting of menu, recipes, hints and helps to the homemaker.

VI. Giving advice on request, over the telephone or by mail, such as recipes and suggestions.

These are only some of the ideas and plans which have been found effective.

We hope in future issues and in other media, to keep this industry informed as to the progress under the above heads, and of other ways and means of building and keeping Home Service interest.

Because the work is a woman's work for women, it is desirable to have a woman with a thorough knowledge of the homemaker's problems in charge. The woman you select must be sympathetic, patient and have a keen understanding of human nature.

A properly organized and conducted Home Service Department will quickly find a place and a work to do in the community, with great and immediate profit in gas company profits and good will.

It is sound and profitable, because home service work is the educating, stimulating and encouraging of the homemaker to do her job well, to help her to keep her family well and fit, her home happy.

Home Service wins good will and increases gas consumption at the same time by helping the homemaker to find new interests in the ever old job of homemaking. How tired she gets of the three times a day question, "What shall we eat," day in, day out, year in, year out.

And then the other problems of the home, such as "those dreadful dishes" to wash, the windows to clean, the clothes to be washed and ironed—it's no wonder the homemaker grows tired and discouraged of that big job of her's and it's no wonder she appreciates your help. It is your greatest privilege and opportunity to help her.

Why?

Because the gas company cannot afford to have her become tired and discouraged with her job.

Because, when her job is well done, she becomes a paying investment for the gas company.

She it is who makes the gas meter "hum," once—no, many times a day in the well operating home. And she it is who buys and pays for the best gas appliances brought to her attention.

Mr. Gas Company, keep your women customers interested in their job of home-making. First, because it is for your own

good, and secondly, because it is your opportunity to be of service to mankind and to your community.

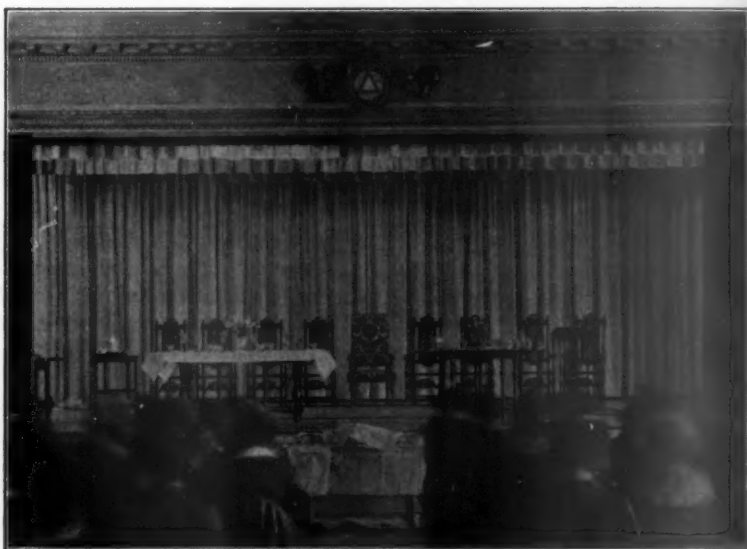
Thus, you see why the Home Service Department must be directed by a woman, with a keen and sympathetic understanding of the homemaker's problems and with a thorough knowledge of home economic subjects.

She will hear such questions as, "My pie crust is always tough, why is it?" "Why do I always have soggy undercrust to my pies?" or "The bread I make is coarse and heavy, what is the matter?" "My meat bills are terrible every month and cause so much trouble in my home. Can you help me?"

The home service worker must not only *tell her why* but be able to tell *how to make things go right*.

These are only a few of the many, many, things the homemaker will want to talk about.

You probably say how does all this in-



All "Set" for a Home Service Afternoon

terest the gas company—because the homemaker is your customer, her job is homemaking.

Home needs, home comforts, and home conveniences are the stock in trade of the gas company, interpreted through gas ranges, gas water heaters, gas ironing machines, gas clothes dryers and other appliances. The homemaker is the buyer.

GOOD WILL—the life blood of a successful business—is another reward of



Viewing With Interest

home service work. This is the intangible quantity we hear so much about and have no way of figuring.

Home economics in business is now a vital factor in many business organizations today. It is a part of the great educational movement for better living.

Other industries, colleges, schools, magazines, daily newspapers, such movements as the "Better Homes in America," "Own Your Own Home" shows, etc., are all a part of this educational work for better living conditions.

The gas company, with its facilities for teaching better living methods, should be the outstanding center for distributing this information in its community.

If you haven't already a Home Service Department, start the work as soon as possible, and the smaller your situation, the greater your opportunities.

Francis D. Murphy

It is with extreme regret that we have to announce the death of Francis D. Murphy, general manager of the Houston Gas and Fuel Co., Houston, Texas.

Scarcely two months before his death, Mr. Murphy had accepted appointment as the representative of the Southwestern Public Service Association in the Technical Section of the American Gas Association, succeeding P. E. Nicholls of the Galveston Gas Co., who was forced by ill health to retire.

Mr. Murphy died at his home, 903 West Main St., in his forty-second year after an illness of about a month.

He began his career in the gas industry as an employe of the Chemung County Gas Co., which was later absorbed by the Elmira Water, Light & Railroad Co., operating in his native city of Elmira. Later he took a position as manager of the Altoona Gas Light Co. of Altoona, Pa.

In 1913, Mr. Murphy accepted the offer of the Houston Gas & Fuel Co. to become its general manager and director, a position which he held up to his death.

Mr. Murphy was a member of the Knights of Columbus, The Rotary Club, the Houston Club, the American Gas Association, and was a director in the Southwestern Public Service Association.

He is survived by his widow and one daughter and by two brothers and a sister in Elmira.

As a mark of respect, all public utility companies in and around Houston were closed during the morning of the funeral, which was held on Monday, February 23. The body was brought to Elmira for interment.

What Is Your Idea?

On the pages following appear reproductions of the eight oil paintings by Fred L. Stoddard which attracted so much attention when they were displayed at the entrance to the Steel Pier at the Atlantic City convention last year.

Unfortunately, it is not possible to reproduce the color values of the original pictures here, and the more modest blacks and grays must serve to carry the message.

The pictures were painted originally for the convention. However, we are extremely reluctant to believe that their usefulness to the industry is at an end. They are popular in appeal, admirably conceived from a publicity standpoint, and depict developments in the gas business that are little understood and, perhaps, never thought about. Considered in a series of eight pictures, they have a distinct educational value.

A great many suggestions for their use have been received from time to time. Among them are their employment in folders, posters, window display cards, calendars, blotters, advertisements, etc., retaining their original colors.

This, as may be suspected, is an expensive undertaking which is estimated to cost about \$3,000 for the eight four-color process plates required, figuring a size of about nine inches deep by ten inches wide for the color prints mounted on cardboard. This large size was suggested as being ideal for distribution to schools, libraries, clubs and other places where there is certain to be a demand for the pictures, provided they are free from commercialism. The plan is to restrict the explanatory text matter to captions only, eliminating all imprinting, but retaining the seal of the Association in a decorative border.

Another suggestion is that a series of four-page folders be issued to the gas companies for distribution to their customers, one folder being devoted to a picture and its description. Still another suggestion is that a single page envelope stuffer be used to describe each painting.

The Association has not felt justified in going ahead with any plan suggested until it has had assurances of support from its member gas and manufacturer company members.

Therefore, we appeal to you for your ideas. If you see a way in which these paintings could be reproduced in a form that would enable you to make a valuable distribution in your territory, we want to know about it. If others agree with you, the Association will proceed with the making of the color plates, and the literature will be issued at cost.

Once Upon a Time—



Van Helmont Discovers Gas

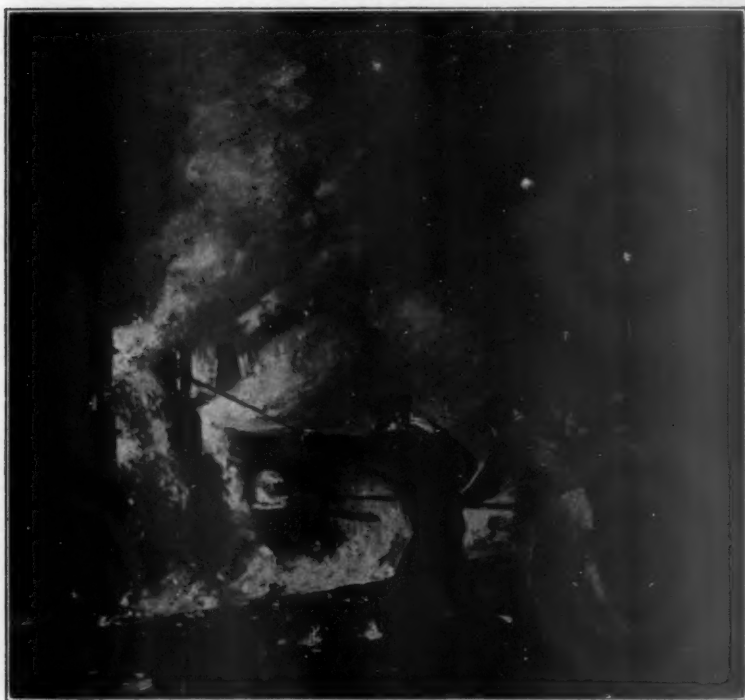


"Here, Gentlemen," Said Murdoch, "Is Gas, the Remedy."

There Was a Marvelous Genii—



The Dream of the Drudge



Tending the Fires That Never Go Out

Who Bore on His Shoulders—



The Burden Bearer of Industry and Home



Gas Does All Things Best

A Great Gift for the Whole World



Gasless Town—A Nightmare of the Past



The City That Gas Made—A Vision of the Future

Our Growing Membership

BEGINNING with this issue the MONTHLY will publish every month the names of new members, both company and individual, who have joined the A. G. A. To appear in this list, applications for membership must reach this office by the fifteenth of the month.

During the last month—from Feb. 15 to Mar. 15—the following were added to the roster:

Individuals

S. Preston Hipsley

F. Warren Cooper
Donald Whitcomb
Ellery Herbert Higgins
Edward F. Standerman
Herbert Eyres Cliff
Wm. L. Heuser
George William Jones
Wilmer K. Allebach
Harold Von Thaden
J. F. Carney
Starling Portz Bahmer
J. H. Ahrens
Nelson A. Newton

Gas Companies

Equitable Gas Company

Manufacturers

The Ohio Foundry & Mfg. Co.
Pennsylvania Furnace & Iron Co.

Consolidated Gas, Electric Light and Power Co.,
Baltimore, Md.
Public Service Electric & Gas Co., Newark, N. J.
Public Service Electric & Gas Co., Newark, N. J.
Public Service Electric & Gas Co., Newark, N. J.
Public Service Electric & Gas Co., Newark, N. J.
Public Service Electric & Gas Co., Newark, N. J.
Public Service Electric & Gas Co., Camden, N. J.
Camden Coke Co., Camden, N. J.
Robins Conveying Belt Co., New York, N. Y.
Utica Gas & Electric Co., Utica, N. Y.
Ohio State University, Columbus, Ohio
Kings County Lighting Co., Brooklyn, N. Y.
Oklahoma Natural Gas Co., Tulsa, Oklahoma

A. Hurlburt, Vice-Pres., Pittsburgh, Pa.

A. B. Sharp, Genl. Mgr., Steubenville, Ohio
R. L. Blodgett, Asst. Treas., Warren, Pa.

In addition to the above, the following 17 individual, five company and seven manufacturer memberships have been received since the beginning of the year:

Individuals

Herbert H. Skinner

James Thomas Teahan

Alph M. Honnet
Thomas L. Goodwin, Jr.
Hinton G. Clabaugh
James E. Kinner
Oliver L. Maddux
John D. Killoren
John J. Needham
Ralph E. Brown
Alexander Berry Greenleaf
Andrew John Dohnansky
Hugh Hamkin Cuthrell
Ralph Edward Titus
Major W. E. Stark
Edward C. Drake
Edmund W. Wakelee

Central Hudson Gas & Electric Co., Poughkeepsie, N. Y.
New York & Richmond Gas Co., Stapleton, S. I., N. Y.
Southwestern Advertising Co., Dallas, Texas
New York & Queens Gas Co., Flushing, N. Y.
72 West Adams St., Chicago, Ill.
The Bryant Heater & Mfg. Co., Cleveland, Ohio
Pittsburg Water Heater Co., Newark, N. J.
The Laclede Gas Light Co., St. Louis, Mo.
The Laclede Gas Light Co., St. Louis, Mo.
Boston Consolidated Gas Co., Boston, Mass.
The Peoples Gas Light & Coke Co., Chicago, Ill.
Bridgeport Gas Light Co., Bridgeport, Conn.
Kings County Lighting Co., Brooklyn, N. Y.
Kings County Lighting Co., Brooklyn, N. Y.
The Bryant Heater & Mfg. Co., Cleveland, Ohio
The Bryant Heater & Mfg. Co., Cleveland, Ohio
Public Service Electric & Gas Co., Newark, N. J.

Gas Companies

Oklahoma Gas & Electric Co.

Ft. Smith Light & Traction Co.
Lake Charles Electric Co.*Holding Companies*Metropolitan Gas & Electric
Company

Southern Gas & Power Corp.

Manufacturers

Baltimore Tube Co., Inc.

Payne Furnace & Supply Co.
Inc.

The Thatcher Co.

Eclipse Fuel Engineering Co.

Adams Bros. Mfg. Co., Inc.

Bernitz Furnace Appliance Co.

The Columbus Heating & Ventil-
ating Co.J. F. Owens, Vice-Pres. & Genl. Mgr., Oklahoma
City, OklahomaR. C. Coffy, Mgr., Ft. Smith, Arkansas
Jos. V. Bowes, Mgr., Lake Charles, La.

Jos. C. Markley, Ch. Engr., Chicago, Ill.

Walter Whetstone, Pres., Philadelphia, Pa.

E. G. James, Secy., Baltimore, Md.

E. L. Payne, Genl. Mgr., Los Angeles, Calif.

Charles T. Aaron, Mgr. Gas Range Dept., New-
ark, N. J.

O. M. Olsen, Rockford, Ill.

E. C. Adams, Treas., Pittsburgh, Pa.

Arthur E. Smith, Pres., Boston, Mass.

W. L. Thompson, Mgr. Gas Furnace Dept., Col-
umbus, Ohio

"In All Fairness"

By MAYOR JOSEPH H. GAINER, Providence, R. I.

From an Address Before the New England Association of Gas Engineers

I HAVE not always praised the gas company. There have been times when I have taken violent sides against the policies of the company. We have disagreed, in other words, in times past; but just as I believe it is my duty to call public attention to the fact that I disagree with a public service corporation when I do disagree with them, so I think it is equally my duty to praise it when it is doing good work.

I know you public utility men sometimes think of us in public life as just natural enemies. You think we don't want to see you exist and prosper, but I think most of us do. We feel that there is a public side to this thing. We feel that you are working for a semi-private corporation and that sometimes you miss the public viewpoint. Maybe we are wrong about that. I think such men as Mr. Charles H. Manchester, president of the Providence Gas Company, and its vice-president and engineer, Mr. F. C. Freeman, do get the public viewpoint,

but after all, we do represent the public.

We are elected to represent the public, and there are two ways you men in public service corporations can accomplish your mission. You must get results for your stockholders—that is natural—but there are two ways of getting those results. You can go along in the old-fashioned way just getting your dividend, or you can go along producing your commodity in the best and most up-to-date fashion, reducing costs so that your dividend can go on, and at the same time the public can get the advantage of all the new advances in science. And that is all any man in public life, who is honest about it, tries to do.

So when we disagree I want you to feel that most of us, anyway, are not trying to injure the utility. We are trying to keep the utility up to the standard at which we believe it ought to be kept in the interests of the public, as well as in the interests of the stockholders.

When Designers Precede the Salesman



Fig. 1. Can Floater of Same Type as Fig. 2 Converted into an Efficient Gas Burner Unit by Proper Design and Application. The Individual Burner Has a Capacity on Three and a Half Pounds Gauge Pressure of Twenty-Five Cubic Feet Per Hour, and Will Function with Perfect Combustion on a Pressure Range of from Two Inches of Water to Ten Pounds. A Period of Only Forty Minutes Is Required to Bring the Solder Bath from Room Temperature to 670° F. Compare This with Data for Fig. 2.

THE Maywood plant of the American Can Company is a recent gas consumer added to the mains of the Public Service Company of Northern Illinois, we read in the Public Service "News."

Gas is used exclusively for all heat processes throughout the plant, with the exception of firing the boilers. The plant formerly operated on producer gas, manufactured at their own gas plant, representing an investment of several hundred thousand dollars.

The producer gas plant has been dismantled, and the Public Service Company is supplying the entire gas load through a 6,000-foot low pressure main extension of 16-inch cast iron main.

The gas is measured through a low pressure Connersville rotary meter with a maximum capacity of 60,000 cu.ft. per hour. The gas will be sold under a maximum demand schedule, and the meter is equipped with a graphic maximum demand recorder.

The annual gas consumption at this plant will probably average around 80,000,000 cu.ft. This is equivalent to the domestic gas load in a town of 15,000 population.

After being metered at low pressure, the gas is boosted and distributed throughout the plant at 3 lbs. pressure. Sub-meters are installed to distribute fuel costs over the different plant divisions served.

The American Can Company produces a wide variety of metal containers for the packing industries. These containers, necessarily low in price, must be produced in large quantities. Quantity production permits of special automatic machinery, with special heat application problems.

The Public Service Company has been instrumental in the development of miniature high pressure gas burner equipment, designed to meet the requirements of the can industry. These burners combine practically unlimited "turn down" quali-

ties with correct combustion and maximum efficiency, a combination difficult to obtain in a miniature burner operated on ordinary high pressure gas. The American Can Company's Maywood plant is equipped throughout with this type of burner equipment.

The principal heat processes employed in the manufacture of cans may be roughly classified as soldering or drying. Automatic machines capable of turning out from 10,000 to 15,000 completed cans per operating hour per unit form the can, solder the side seam, flange the ends, crimp in the bottoms, automatically test for leaks, and deliver the cans to a conveyor running to the shipping department. Gas is used for soldering purposes.

Paper labels formerly pasted on food product cans are largely superseded by labels lithographed directly upon the can during the process of manufacture.

Blank tinned sheets are printed in a press similar to a standard press, using lithograph ink instead of printers' ink. These sheets are then conveyed through long drying ovens which dry or bake the ink on the metal. One color is printed and baked per operation. Additional colors call for successive operations of printing and baking.

In order to produce accurate results, a definite heat cycle must be maintained throughout the oven. Here again, gas, the flexible fuel, solves the problem with an absence of soot and smoke prevalent with other direct fired fuels. Continuous operations can be duplicated with minimum of supervision. These lithographed sheets are then sheared, and the can blanks are fed to a can machine which delivers the product to the shipping department.

Lithographed labels are more durable than paper labels and permit of process-

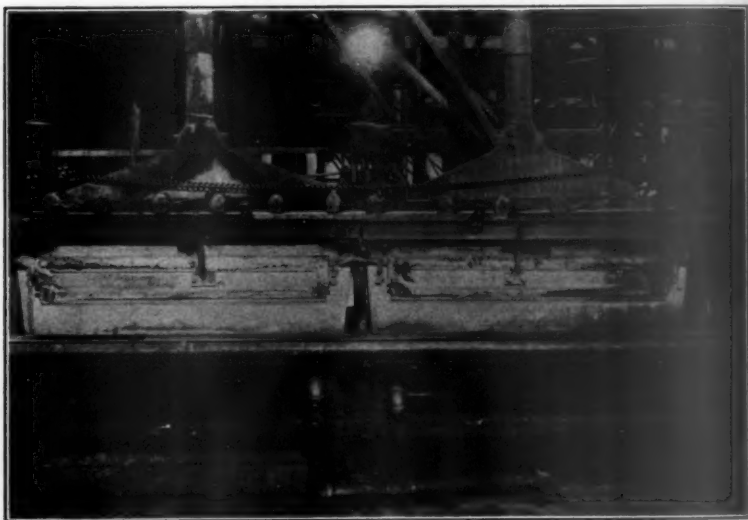


Fig. 2. Can Floater, Originally Designed to Burn Coal, Equipped to Burn Gas. This Is an Example of Faulty Gas Burner Application. The Combustion Chamber Is Excessive in Size; Radiation Losses Are High, and Control of Secondary Air for Combustion Is Impossible. A Period of One and a Half Hours Was Required to Bring the Solder Bath from Room Temperature to 670°.

sing or cooking food products directly in the container without injury to the label. A review of the labels being produced at Maywood represents many of the familiar advertising trade marks and also many printed in foreign languages.

Certain food products contain acids which attack the metal of the container, causing a taint to the content. Such containers are coated with a special varnish which is baked on the side of the plate forming the inside of the container. This lacquer coat presents a surface impervious to acid action. Very accurate temperature control is essential for uniformity of product. Gas is the only fuel possessing the flexibility to produce the desired results. Thermostatic control and correct mixture of gas and air obtained with proper burner design, eliminates the human element in operation.

When the machine operator is relieved of the responsibilities attendant upon



Fig. 4. Rear View of Can Body Forming Machine Showing Arrangement of Individual Burners on Manifold and under Solder Reservoir. Special Lithograph Oven Burners, High Pressure Soldering Irons, Soldering Irons, etc., Were Also Designed to Meet Requirements of Plant.

manual control of temperatures, he can concentrate his entire effort on production.

The production of metal containers was formally confined to the packing of vegetables and fruits. This presented a problem of seasonal production dependent upon the normal canning seasons. Many more food products and non-food products are now marketed in metal containers. This permits of constant production of cans throughout the year. The peak production period still occurs during the summer months, but production during winter months has grown steadily until it represents probably 50 per cent of the maximum summer production.

Uniformity of product is dependent upon correct heat application and control. Through experience, the can industry has learned the value of gas.



Fig. 3. Can Body Forming Machine Showing Proper Gas Burner Application. Thermostat Is Shown in Place at Left Side of Burners. New Equipment Produces Regulation within \pm F., with 30% Saving in Former Gas Consumption.

In Memoriam

L. E. Sanderson, Rochester Gas & Electric Corp.
F. L. Belcher, Springfield Gas Light Co.
L. O. Fielding, Boston Consolidated Co.

The Carnegie Fund Hears of a Gas Man



Fred E. Wunsch

HERE is a story of public service and heroism of which we can be none the less proud because it was performed by an employe of a natural gas company. Similar circumstances have drawn a similar response wherever good gas service is in effect.

The hero of the story is Fred E. Wunsch, an employe of the Dayton Gas Company, a subsidiary of the Columbia Gas and Electric Company of Ohio.

On the morning of January 8, a fire broke out in the Rotterdam Building in Dayton. Before the fire department could reach the scene, the flames had gained considerable headway in the basement and had swept through the walls to the fifth floor.

Forty people were in the building, and more than a score, overcome by fumes, were carried out, unconscious, by the firemen. So intense was the heat in the basement that the lead meter connections had melted, and the firemen were fighting back the flames to enable some one to gain access to the front of the cellar where the gas could be turned off.

As the fire was well under way, they were having little success. The volume of escaping gas was rapidly increasing, and an explosion was expected at any moment, when Wunsch ran fearlessly into the fume-banked cellar and turned off the gas at the service line.

Unlike many such heroic acts, this one did not go unmarked or unappreciated. A week later Mr. Wunsch received the following:

January 14, 1925.
Mr. Fred E. Wunsch,
114 Malbora Place,
Dayton, Ohio.

Dear Sir:

Through the reports made in the local papers and the statements made by witnesses, the City Commission has learned of the service which you rendered to our city during the fire at the Rotterdam Building last Thursday morning.

We desire to extend official recognition of your service to the citizenship of our city, and the heroism which you displayed at the moment when both life and property were in jeopardy.

While this body lacks the power, as well as the means, to express the real appreciation of the people of our city of services such as you have rendered in placing your own life in jeopardy to save the lives and property of others, we hope you will accept this letter of commendation as an indication of our desire to accord your heroic act the recognition which it justly deserves.

We extend to you the thanks of a grateful citizenship.

Sincerely,

(Signed) The City Commission.

In addition to the above, the City Commission recommended Mr. Wunsch to the consideration of the Carnegie Hero Fund.

THE COKE HABIT

THE COKE HABIT is like scarlet fever; once it gets a good start in a community, it spreads like wild fire. Here are some figures from the British Columbia Electric Railway Company to prove it.

Coke sold in the last six months of

1921	3,903 tons
1922	7,595 tons
1923	8,270 tons
1924	11,511 tons

That is an increase of 7,608 tons, or nearly 200 per cent, in four years.

Here's Service for You!

THE worst blizzard since the record breaker of 1888 occurred in Utica, N. Y., on January 29-30, and gave the employes of the Utica Gas and Electric Company an opportunity for a piece of real service which brought forth the spontaneous praise of the entire population, including the mayor himself.

The gas industry is devoted to public service, but one act and example like the following is worth many columns of "publicity."

First of all, there was no interruption in gas service. Then, being assured of that, the gas company went ahead and opened up the streets for the public. Saturday morning from eight to ten o'clock the big coke trucks were turned loose in order to help Uticans get downtown to work. On streets where it was impossible for trolleys to operate, the trucks blazed the trail. Ladders were used to lift men and women out of the snow-banks and into the trucks. It is estimated that fully 1,000 people were carried to work in this manner.

Friday and Saturday nights a large number of the trucks were turned over to the use of the city department of public works for aid in clearing the streets of snow. They were in service throughout the nights mentioned. On Friday night the coke trucks, not being used for passenger service, were used in the removal of snow on the roadway to the coal-gas plant.

In the gas service building men remained for any emergency calls that might arise. Fourteen cots with blankets and pillows were used to accommodate these men. Men in the maintenance and distribution department were active throughout the period of the storm and after to help shovel out.

Results:

1. Public appreciation.

2. The following letter from Mayor Frederick Gillmore to F. B. Steele, vice-president of the Utica Gas and Electric Company:

"I want you to know how much I appreciate the courtesy of yourself and the company you represent in offering the city the use of your equipment to assist



Uticans Will Long Remember This

us in getting the city streets opened after the storm of Thursday night. Your men and trucks gave us much needed assistance at a very critical time and did much to promote the good work.

"This sort of co-operation is what makes for the public good, and I am sure your opportune assistance will be duly appreciated by the city at large, as well as by the administration officials."

RECRUITS FOR THE INDUSTRY

PROFESSOR H. K. BENSON, head of the Department of Chemistry of the University of Washington, has offered to furnish lists of graduates of chemical engineering to those companies desiring men who have gone through the course of training given in that institution.

Professor Benson reports that the University has sent a considerable number of its graduates into the gas industry in years past, and hopes it may continue to do so on an even larger scale in the future.

Students of this department in Washington University all receive a very thorough training in the elements of mechanical engineering and chemistry, and are ideally fitted for the gas industry.

Why the Public Service Company Should Advertise the Community

By DON E. MOWRY, Chairman, Extension Committee, Community Advertising Department of the Associated Advertising Clubs of America

(Continued from March issue)

While some admit that the organized community life of today is built around public utility services, others do not know enough about local, state, or national affairs to admit this to be the fact. If the utilities are to impress the fact upon the communities that they serve the commercial, industrial, and social life, it will be necessary for the utilities to assist in building up this fact, as well as good will for the utilities themselves.

Corporations engaged in various firms of public service no longer adhere to the policy of that New Yorker, who, years ago, said: "The public be damned." On the contrary, the managers of such corporations have learned the value and importance of studiously cultivating the public good will and holding the confidence of the people. As a result, many corporations engaged in public service now conduct systematic campaigns intended to promote public confidence and good will.

Not very long ago Chairman L. E. Gettle, of the Wisconsin Railroad Commission, strongly urged the general adoption of this policy on the part of public service corporations. This good advice is repeated and emphasized by Samuel E. Hudson, of the Rhode Island Public Utilities Commission, in a statement issued for publication by the press. Mr. Hudson expresses the firm conviction that all public utility concerns "should strive persistently, consistently, and insistently to develop the good will of the communities which they serve." And the

best way to do this, he explains, is through the proper use of the advertising and the news columns of the press. He says: "It is important primarily that the public be kept fully, accurately, and quickly informed. The best manner in which to put the message across is through the newspapers. Do not forget that full and clear publicity on all matters connected with one's concern, which is a public utility and as such is responsible to the public and the state, as well as to your stockholders, will bring dividends in good will and in the cooperation of your customers."

There can be no question concerning the correctness of these observations or the real value of the advice which is offered. The good will of the public, is, indeed, a most valuable asset for any concern engaged in business, and it practically is essential for the continued success and prosperity of any public utility. It may seem easy to gain and hold the community's good will by keeping the public fully and accurately informed on matters of mutual interest and concern. At the same time, of course, it extends to the public a degree of fair treatment that will win approval and support, when the public utilities of this country plan their advertising, so that it assists in promoting and developing communities. Again, through cooperation with those who are staging community advertising programs, a still further step, and a more effective one, will have been taken in the interests of the utilities themselves.

It is customary to adopt a policy of

The above is taken from "Community Advertising" by Don E. Mowry, issued by The Cantwell Press, Madison, Wis., with permission of the author and the publisher.

continuous educational publicity, designed to tell its customers and the public at large all there is to know about itself, its problems, and its policies. But, if our utilities would couple up their advertising so that it would ring true for the community or communities that it serves, each special advertisement carrying special community copy to fit each local situation, an interesting and decidedly profitable policy would have been adopted. If utilities advertised with communities, it is entirely within the range of probabilities that the communities, themselves, would advertise for the public utilities. It would not take many years of advertising of this sort to eliminate the necessity of re-selling the rising generation to a proper appreciation of utility service, because there would have been engendered a feeling that the utility was actually doing much to promote the community.

Many utilities serve many communities. In planning advertising copy, especially designed to meet the needs of one community, many economic situations will arise calling for special attention. Those who are guiding the utility-community advertising campaigns would discover very often ways and means of checking unfavorable tendencies and developing favorable tendencies. A distinct service could be rendered over an entire state or a section of the country. If people must be educated to cooperate with public utilities, these same public service corporations must actually demonstrate that they are functioning, not only with the community, but also as a part of the community.

If the telephone company finds it necessary to install a new west side cable, at a cost of \$75,000, why not tell the local community of that step which is being taken! If you had the viewpoint of the community advertising agency, the great-

er portion of the advertisement would probably be used to state something very definite about the growth of the city; of belief in the community's future efforts to keep pace with the needs of the town. In smaller type you would say something about the new \$75,000 cable and when it would be installed. Such advertisements are of direct help to the people of the community. They help sell the people their town; they help sell the utility to the people. Such community advertising cooperation is real community building. An effective educational campaign can be "put over" through the community advertising plan without the public fully appreciating the fact that a campaign is being put over.

Localize the Copy

Instead of starting out with copy reading: "What is a Public Utility?" and following this up with an editorial advertisement, the person who appreciates the advantages of linking up his campaign with the community would probably feature the assets of the town and ask for further cooperation on the part of the public in developing needed improvements and business phases of the community's program. A definition of a public utility and other explanatory remarks, covering the same ground that might be incorporated into an editorial advertisement, would appear either as a blocked item on a small portion of the copy space or as a note just above or below the name of the public utility.

It is necessary for the utilities to make a market for the things which were at one time not looked upon as particularly fruitful advertising projects. We can remember when the local gas company, and the electric light company, and the traction line, and numerous other highly essential enterprises, common to most progressive communities, suffered in si-

lence when the public accused them of everything from piracy to petty theft. They might know that they were falsely accused, but what was to be done about it? An occasional "signed statement" in the public press and numerous dry-as-dust form letters mailed to stockholders comprised the come-back, says W. Livingston Larned, a writer on advertising subjects.

Advertising by public utilities has revolutionized this condition. When a public utility has a grievance, an especially difficult situation, need for additional working capital, it formulates a basic theme and turns to advertising. Advertising is read. A public utility commands its audience, which is made up, practically, of every person living in the community and its suburbs. You may not read the first one or two pieces of a utility series, but the campaign will "get you," finally.

"It seems unbelievable," says Mr. Larned, "that for so many years these public utilities failed to recognize their own productivity in the matter of interesting, dramatic, picturesque advertising material. A gas company in a mid-west city not long since completed a newspaper series of several months' duration, during the run of which the inside story of gas manufacture, piping, number of people employed, manufacturing industries supplied, was told so alluringly that the entire state read the copy. There were no cries of 'propaganda'. 'Folks' wanted to know. It proved an interesting subject to them. And, in the end, a wave of sympathy was created for this public utility which has entirely changed its status in its own community. Reprimand and suspicion have been replaced by confidence."

Tomorrow will see a change in the advertising copy of many of our utilities. Not only will these companies tell the

story of their businesses to the public, but they will also aid the communities they serve with cooperative community advertising copy that will be furnished without cost to the towns, villages, cities, and rural communities that they are now serving. There are numerous ways of doing this. It has been said that there are four kinds of advertising that are necessary for the public utility company: (1) Service advertising; (2) merchandise and appliance advertising; (3) financial advertising to sell securities; and (4) institutional advertising to lend background and support to the other three.

It will be discovered in a few years that community advertising will be necessary to make more secure these four forms of advertising now employed by advertising men in our public utilities. Because community advertising is becoming so important, growing by leaps and bounds, advertising, itself, will become a major item of utility organization operation and of legitimate operating expense.

BROADCAST THESE FACTS!

THE GAS COMPANIES of the United States sold 405 billion cubic feet of manufactured gas in 1924.

Sales of manufactured gas for 1924 showed an increase of 20 billion cubic feet over 1923.

In the last six years sales of manufactured gas have shown an increase of 100 billion cubic feet.

During 1924 the manufactured gas companies of America connected 440,000 new customers to their lines.

Total number of customers of manufactured gas companies in the United States as of December 31, 1924 were 10,240,000.

Affiliated Association Activities

Wisconsin Gas Association

The annual convention of the Gas Section of the Wisconsin Utilities Association, held at Stevens Point, Wisconsin, on February 26 and 27, leaves no doubt in the minds of the leaders of the industry in that state of the success of the plan of holding sectional meetings of the various public utilities which make up the Wisconsin Association. The attendance was splendid, surpassing expectations. The discussions were timely and intelligently participated in from the floor. The entertainment features were well planned and altogether delightful.

Led by Mr. Geo. H. Wilmarth of the Northern States Power Company, there was an interesting debate on the subject of "Employees' Activities and Organizations." It was clearly developed that the gas companies in Wisconsin are in full step with the important work of education of gas company employees in the fundamentals of public service. Mr. Wilmarth was followed by Mr. G. C. Neff of the Wisconsin Power and Light Company and President of the Wisconsin Utilities Association. The Insull and Bylesby companies have regular systematic instruction in the prone pressure method of resuscitation.

"Interesting Side-Lights on Household Refrigeration" was discussed by Professor O. L. Kowalke of the University of Wisconsin. His address will be published. In the debate on the floor which followed there was manifest a feeling that refrigeration machines require a certain amount of maintenance which should fairly be borne by the user just as he bears the cost of maintenance of his automobile. As an alternative it was thought that a flat annual charge for maintenance might be worked out.

Other interesting addresses on the program were as follows:

"Importance of the Accuracy of Instruments"—Mr. R. L. Rundorff, Northern States Power Co.; "Problems Arising in Connection with Erection of Holders and Putting Them into Service"—Mr. A. F. Davey, Wisconsin Public Service Corp.; "What the House-Wife Expects and Receives in the Way of Gas Service"—Miss Bessie Mae Allen, Director of the Home Economics Department, Stevens Point Normal School; "Present Problems of the Gas Industry"—Major Alexander Forward, Secretary-Manager, American Gas Association; "What Effect Will Reinforced Concrete Pavement Have upon the Location of Mains"—Mr. I. F. Wortendyke, New Gas Light Co.; "What I Found Out About Welding Steel Mains"—Mr. Louis Stein, Northern States Power Co.

Miss Allen submitted some interesting figures on comparative cost of fuels in home cooking.

A dinner, followed by an entertainment and dancing, was greatly enjoyed.

In spite of extreme cold weather, an inspection trip to the gas plant and other points of interest was much enjoyed. Mr. J. G. Felton of the Northern States Power Company, chairman of the Gas Section, presided, and he, with Secretary John N. Cadby, of Madison, were generally complimented upon the success of the convention.

Wisconsin Utilities Association

Secretary John N. Cadby has announced the following program for the annual convention of the Wisconsin Utilities Association to be held in the Hotel Pfister, Milwaukee, Wis., on April 16, 1925. Address of President—G. C.

Neff, Vice-President, Wisconsin Power & Light Company; address of Treasurer—Harrison A. Smith, President, Southern Counties Power Company; address by R. F. Pack, Vice-President, Northern States Power Company; report of Public Relations Committee by Chairman John St. John, Vice-President, Madison Gas & Electric Company; report of Committee on Women's Public Information by Chairman Lillian Minch, Wisconsin Power & Light Company; and an address by Chairman Lewis E. Gettle, Railroad Commission of Wisconsin. Marshall E. Sampsell, President, Middle West Utilities Company, will be one of the speakers at the banquet. Plans for the entertainment of the women and general entertainment following the banquet are in charge of B. W. Arnold of the Chicago, North Shore & Milwaukee Railway Company.

Empire State Gas and Electric Assoc.

The meeting of the Gas Section of the Empire State Gas and Electric Association was held at Utica, at the Hotel Utica, March 5 and 6, 1925. The sessions were very well attended and an enthusiastic spirit prevailed throughout. The chairman, F. F. Ingwall of the Binghamton Gas Works, presided in a most pleasing and efficient manner and succeeded with much tact in directing the course of the discussions so as to enable a very large program to be completed in the time allotted.

Following the question box and answers and a resumé by the various district chairmen upon the principal developments in their territories, the Nominating Committee reported the nomination of Charles C. Atwood, assistant chief engineer of the Brooklyn Union Gas Company as chairman for the ensuing year, who was unanimously

elected. The service engineer of the American Gas Association, A. Gordon King, briefly outlined the activities of that Association. C. E. Paige, Vice-President of the Brooklyn Union Gas Company, delivered an interesting and well rounded discussion on the subject of "Public Relations."

Wm. M. Carpenter's paper on "Oil—the Gas Man's Next Problem" was a carefully prepared and illustrated talk that went into the subject of the future of this important commodity in the very greatest detail. M. H. Spear of the New York & Queens Gas Company gave an interesting description, illustrated with lantern slides, of the new waterless gas holder recently erected in Flushing, N. Y. Mr. Spear was followed by J. E. Burke of Buffalo whose paper on "Labor Saving Equipment in Gas Distribution" proved to be a comprehensive survey of valuable equipment and the success attained by its use in the Buffalo territory. The next paper on "Utilization Difficulties Encountered in Changing from Carburetted Water Gas to Mixed Gas" was presented by T. Spanagel of Rochester.

On March 6 the meeting was opened by the showing of the gas section film of the Rochester Gas & Electric Corporation. This was followed by a talk on "The Gas Demand Rate" by G. I. Vincent of Syracuse, which was interesting and emphatically expressed the idea that the gas industry must speedily go into scientific rate making.

An extremely interesting discussion and description of a high pressure system in the territory of the Westchester Lighting Company was given by J. H. Crowell of that company. Mr. Crowell was followed by O. H. Smith of the Consolidated Gas Company, who described the use of bituminous coal for water gas generation, and he in turn was followed by R. L. Manier of Syracuse,

who described metering large quantities of gas on consumers' premises.

This session was followed by a group luncheon; the manufacturing group led by C. C. Atwood of the Brooklyn Union Gas Company; the Distribution Section by W. C. Sykes of the Rochester Gas & Electric Corporation; and the industrial group by R. L. Manier of the Syracuse Lighting Company. The luncheon and discussion were both most enjoyable, and much information was profitably developed.

During the afternoon, a large number of the members and visitors proceeded to the new coal gas plant of the Utica Gas & Electric Company to inspect the Koppers small ovens.

Eastern States Gas Conference

The annual Eastern States Gas Conference will be held on Wednesday and Thursday, April 22 and 23, 1925, in the auditorium of the Public Service Electric and Gas Company, 80 Park Place, Newark, New Jersey. The following well diversified program will be presented:

April 22

Mechanical Billing of Customers' Accounts—J. L. Conover.

National Sales Plans of American Gas Association—J. P. Hanlan.

Selling Your Securities to Your Customers—Percy H. Whiting.

April 23

Making More Sales Through the Cooperation of Manufacturers—Wayne W. Calhoun.

The Future of House-Heating by Gas—J. A. Perry.

Home Service Work and Its Effect on Public Relations—Miss A. B. Swann.

Selling the Gas Range Through Newspaper Advertising—Miss J. MacRorie.

Accident Prevention — Charles B. Scott.

The Importance of an Industrial Survey—H. O. Loebell.

The Attractive Gas Works—J. B. Jones.

The annual banquet will be held on the evening of April 23 at the Robert Treat Hotel.

New England Assoc. of Gas Engineers



Herbert N. Cheney

The following were the officers elected at the annual meeting of this association held in Providence, R. I., February 18 and 19: H. N. Cheney, President, Boston Consolidated Gas Co., Boston, Mass.; F. C. Freeman, vice-president, Providence Gas Co., Providence, R. I.; A. J. Smith, vice-president, Concord Gas Co., Concord, N. H.; John L. Tudbury, secretary-treasurer, Salem Gas Light Co., Salem, Mass. Directors: G. W. Stiles, Portland, Me.; F. E. Drake, Lynn, Mass.; H. Vittinghoff, Boston, Mass.; A. H. Scott, New Britain, Conn.; I. T. Haddock, Cambridge, Mass.

Pennsylvania Gas Association

The annual meeting of this association will be held at the time of the Eastern States Gas Conference, on April 22, 1925, at the Newark Athletic Club, Newark, N. J., from 12:30 to 2:00 p.m. This meeting is a short business session at which the election of new officers will take place and a report made on the activities of the Association during the past year.

New Jersey Gas Association

The annual meeting and election of officers of the New Jersey Gas Association will be held in conjunction with the Eastern States Gas Conference at New-

ark, New Jersey, on April 22 and 23, 1925.

Conference of Secretaries

The Conference of Secretaries of Public Utility Associations, held in St. Louis on February 9, was a very successful one. The entire day was devoted to the problems of gas, electric and electric railway associations, whether state, district or national in scope. Such conferences are immensely valuable to the secretaries in providing an opportunity to discuss their activities and problems. The officers of the Conference were re-elected, namely, E. N. Willis, president, and J. N. Cadby, secretary.

Indiana Gas Association

President G. M. Johnson has announced that the annual convention of the Indiana Gas Association, which has been formerly held in May, will be held this year during September, date to be announced later. An attempt is being made to make it possible for men connected with both gas and electric properties to attend the meetings of the Indiana Electric Light Association, Great Lakes Section of the National Electric Light Association and the Indiana Gas Association without interference.

Iowa District Gas Association

The 20th annual convention of this association will be held in Cedar Rapids, Iowa, April 22, 23, and 24, 1925. It is expected that a very interesting program will be presented. Hotel reservations already made at Cedar Rapids indicate a large attendance. Further details can be obtained from Secretary H. R. Sterrett, 551 Seventh Street, Des Moines, Iowa.

Michigan Gas Association

The annual convention of the Michigan Gas Association will be held at Mackinac Island on July 9, 10 and 11, 1925. This association, through its sec-

retary, A. G. Schroeder, cordially invites all gas men to take advantage of the opportunity to spend some time in the wonderful Michigan summer resort country. Announcements in regard to the program will be announced in due time.

Missouri Association of Public Utilities

The annual convention of this association will be held May 7, 8 and 9, 1925, at Joplin, Mo. The Program Committee is arranging for a speaker of national prominence, in addition to other instructive and entertaining features. Hotel reservations may be made direct or by addressing M. L. Margenau, Empire District Electric Company, Joplin, Missouri.

Southwestern Public Service Assoc.

The Southwestern Public Service Association will hold its 30th annual convention at Houston, Texas, May 5-8, 1925, with headquarters at the Rice Hotel. This association includes in its membership not only gas companies, both manufactured and natural, but also electric service and railway companies. This necessitates a very full program, which will include both sectional meetings, in which the several branches of the public service industry will meet and discuss their peculiar problems, and general meetings where all the members of the industry as a whole will consider problems of general interest.

A program has been arranged to provide general meetings on the afternoon of May 5 and the mornings of May 6 and 8, at which several of the most prominent men in the public service industry have already accepted invitations to speak. Special sessions for the gas men are scheduled for the afternoon of May 6, and the morning and afternoon of May 7. About 600 delegates are expected to attend.

GENERAL

CHAIRMEN OF GENERAL COMMITTEES ORGANIZED TO DATE

Accident Prevention—C. B. SCOTT, Chicago, Ill.
Amendments to Constitution—WM. J. CLARK, Yonkers, N. Y.
American Engineering Standards Committee Representative on—A. H. HALL, New York, N. Y.
 (Alternate Representative) W. J. SERRILL, Philadelphia, Pa.
Award of Best Medal—H. C. ABELL, New York, N. Y.
Chamber of Commerce of U. S.—J. B. KLUMPP, Philadelphia, Pa.
Cooperation with Educational Institutions—W. G. GIBBEL, Philadelphia, Pa.
Customer Ownership—CHARLES A. MURRO, Chicago, Ill.
Education of Gas Company Employees—B. J. MULLEN, Chicago, Ill.
Entertainment—WM. J. CLARK, Yonkers, N. Y.
Finance—JAMES LAWRENCE, New York, N. Y.
Gas Safety Code—W. R. ADDICKS, New York, N. Y.

Gas Standards & Service—J. A. PERRY, Philadelphia, Pa.
General Specifications—A. H. HALL, New York, N. Y.
Geographic Sections—L. R. DUTTON, Jenkintown, Pa.
Managing Committee of Appliance Testing Laboratory—R. W. GALLAGHER, Cleveland, Ohio.
National Fire Protection Association—R. S. DOULL, New York, N. Y.
Nominating—R. B. HARPER, Chicago, Ill.
Rate Structure—EWARD HAASE, Milwaukee, Wis.
Representation on National Joint Committee of Public Utility Associations—D. D. BARNUM, Boston, Mass.; H. L. DOHERTY, New York, N. Y.; A. P. LATHROP, New York, N. Y.; P. H. GARDNER, Philadelphia, Pa.; CHARLES A. MURRO, Chicago, Ill.; WM. L. RANSOM, New York, N. Y.; ALEXANDER FORWARD, New York, N. Y.; H. C. ABELL, New York, N. Y.; T. V. PURCELL, Chicago, Ill.
Theft of Gas—H. B. FLOWERS, New Orleans, La.
Time and Place—R. B. BROWN, Milwaukee, Wis.

Correspondence Course in Gas Service



Jerome J. Morgan

B. J. MULLANEY, chairman of the A. G. A. Committee on Education of Gas Company Employees, has announced that a correspondence course on gas manufacture, distribution and utilization

is to be offered by Columbia University, New York City, under the auspices of his committee. An advisory committee is assisting the Columbia faculty in the preparation of the course, which, it is expected, will be started next September.

C. E. Paige, Vice-President of the Brooklyn Union Gas Company, Brooklyn; F. C. Weber, Cities Service Company, New York; A. E. Forstall, New York, and W. S. Yard, Vice-President, Pacific Gas and Electric Company,

comprise the Advisory Committee.

Professor Jerome J. Morgan, Department of Chemical Engineering of Columbia University, is in direct charge of the course.

There is no question that, with these men actively engaged in the preparation of the course, a big enrollment should result.

The course will be particularly designed to give any one having a high school education or its equivalent a good fundamental technical knowledge of gas manufacture, distribution and utilization. It will consist of 24 lessons covering a period of two years, one lesson a month, and each lesson will require from eight to ten hours' work. The cost of the course will be about \$60, including text books.

Further announcements will be made concerning the acceptance of enrollments as soon as it is definitely determined when the course will be ready.

DATE SET FOR SPRING CONFERENCE

The time for holding the annual spring conference of the Executive Board and Advisory Council of the Association at the Hotel Traymore in Atlantic City, tentatively set for June 3, has been changed to May 22-23. Further announcements in connection therewith will be made later.



Purdue University, Conference for Gas Metermen, Feb. 23-25, 1925

Purdue Meter Course a Success

FIFTY-FIVE gas metermen were in attendance at the Conference for Gas Metermen which was offered by the Engineering Extension Department of Purdue University at LaFayette, Indiana, on February 23-24-25, 1925. The conference was held under the direction of the School of Chemical Engineering in co-operation with the Indiana Gas Association. Professor H. C. Peffer, head of the School of Chemical Engineering, was chairman of the conference. Prof. W. A. Knapp, assistant director of the Engineering Extension Department, was in charge of the general arrangements.

The program was arranged along practical lines intended to be of especial value to the shop men. Lectures and demonstrations covering both tin and iron covered meters were offered. The lectures and demonstrations were followed by shop practice covering the usual operations in testing, making partial or complete repairs, and proving and adjusting meters taken from service. The shop work was checked by competent meter shop foremen and approved ready for the meters to be put back into service.

PROGRESS OF GAS IN TECHNICAL SCHOOLS

THE COMMITTEE ON CO-OPERATION with the General Committee on Contact with Educational Institutions reports that surveys of gas equipment in use in technical schools and universities are under

way in the various sections of the country.

Surveys have already been completed at the University of Oregon and Massachusetts Institute of Technology.

In addition a representative list of men qualified to present the value of industrial gas application to schools and colleges has been secured.

State and regional associations are giving hearty co-operation to this committee in covering its assignments.

1924 BREAKS RECORD

Public service companies of the country made a record for all time in new financing for 1924. According to figures compiled by the Commercial and Financial Chronicle of New York, new capital received up to December 31 amounted to \$1,325,600,827, not including an additional item of \$204,039,000 for refunding purposes. This is at the rate of more than \$3,600,000 a day, compared with a rate of slightly more than \$2,400,000 a day during 1923.

Compared with other industries which have provided new money for expansion during the year, the public service companies took nearly one and a half times as much as all the railroads, and only about \$43,033,441 less than the total of all other industries put together excepting the railroads.

December did its part in keeping up the rate of expansion, new financing during that month being \$117,630,700, with an additional amount of \$15,276,700 for refunding.

ACCOUNTING SECTION

H. C. DAVIDSON, Chairman

DeWITT CLINTON, Vice-Chairman

H. W. HARTMAN, Secretary

MANAGING COMMITTEE—1925

ARMSTRONG, J. J., Toronto, Ont., Canada (Canadian)
 BUCHOFF, W. H., Savannah, Ga.
 BLANCHFIELD, JOHN I., Brooklyn, N. Y.
 CARMICHAEL, E. T., Elkhart, Ind. (Indiana)
 CABELL, W. H., Baltimore, Md.
 CHALKERS, W. D., Baton Rouge, La. (Southwestern)
 CLINTON, DeWITT, Worcester, Mass. (N. E. Assn. Gas Engrs.)
 CONOVER, J. L., Newark, N. J.
 DORRIS, W. A., Boston, Mass.
 ELACH, PETER, Hammond, Ind.
 ELASH, EWALD, Milwaukee, Wis. (Wisconsin)
 HALL, H. B., East Braintree, Mass. (Gas Sales)
 HALL, ISAAC S., Boston, Mass.
 HERR, J. W., Philadelphia, Pa.
 JAMES, F. M., Aurora, Ill. (Illinois)
 KELLER, A. R., Syracuse, N. Y.
 KURY, ADAM, Detroit, Mich.
 LaWALL, H. J., Philadelphia, Pa.

LAWRENCE, JAMES, New York, N. Y.
 McKAEE, G. E., Chicago, Ill.
 MEYERS, W. J., New York, N. Y.
 PAGE, H. M., Charleston, S. C. (Southern)
 PATTERSON, F. H., Rochester, N. Y.
 PETTER, W. H., Newark, N. J. (New Jersey)
 PLATT, C. W., Portland, Ore. (Pacific Coast)
 PORTER, EDWARD, Philadelphia, Pa. (Pennsylvania)
 POTTER, O. F., Newark, N. J.
 PRESSANO, E. P., Yonkers, N. Y.
 REESE, J. G., Baltimore, Md.
 REYNOLDS, A. E., Springfield, Mo. (Missouri)
 SAUER, W. A., Chicago, Ill.
 SCOBELL, E. C., Rochester, N. Y. (Empire State)
 SEARING, R. B., Sioux City, Iowa. (Iowa)
 SHORT, A. F., Providence, R. I.
 SPEAR, M. H., Flushing, L. I., N. Y.
 TOSSELL, A. L., Chicago, Ill.
 WARNER, O. E., Ithaca, N. Y.

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Analysis of Gas Company Statistics—H. J. LaWALL, Philadelphia, Pa.
 Customers Accounting Committee—J. L. CONOVER, JR., Newark, N. J.
 Insurance—J. G. REESE, Baltimore, Md.
 Nominating—W. A. SAUER, Chicago, Ill.

Relations with Customers—W. A. DORRIS, Boston, Mass.
 State Representatives—A. L. TOSSELL, Chicago, Ill.
 Undistributed Structural Costs—J. I. BLANCHFIELD, Brooklyn, N. Y.
 Uniform Classification of Accounts—W. J. MEYERS, New York, N. Y.

Recommended Classes of Insurance

Rating Organizations Listed Respecting Adoption of Inherent Explosion Clause

By J. G. WHITE, Chairman of Insurance Committee

THE size of the gas company is a determining factor in the amounts and classes of insurance that should be carried.

First, fire insurance is recommended, especially in view of the use of the inherent explosion clause in the policies. If blanket insurance or specific insurance is carried, care should be taken to see that sufficient insurance coverage is placed to comply with the co-insurance clause. Fire insurance on gas holders is available now, since the use of the inherent explosion clause is permitted, and in view of the low rate obtainable and the use of the co-insurance clause.

Secondly, if the company is not finan-

cially able to carry the burden itself, workmen's compensation insurance should be obtained. Public liability insurance is available under the same circumstances. However, if the company feels warranted in carrying part of the risk, excess insurance may be obtained to cover items over and above a certain contemplated amount.

Boiler insurance is necessary, not only for the protection it affords against possible loss due to explosion, but from the viewpoint of inspection service.

Automobile insurance, especially fire insurance, should be carried, and the same thought as applies to public liabil-

ity holds good here as regards automobile liability.

Plate glass insurance should be considered for the office buildings and show rooms.

Fidelity bonds should be carried on all employes who are entrusted with the care of money or whose dishonesty in connection with accounts or in handling store

room materials might cause loss to the employer.

Safe burglary, interior hold-up, messenger and paymaster hold-up insurance should also be considered.

These are the principal classes of insurance which are applicable to gas properties. Local conditions, however, may necessitate certain other classes.

The following is a list of the rating organizations of the country showing which have and which have not adopted the revised schedule and inherent explosion clause:

	<i>Gas Plant Schedule</i>	<i>Inherent Explosion Clause</i>
New York Fire Insurance Rating Organization	Adopted	Adopted
	(Including New York City)	
Underwriters' Association of the Middle Dept.	Adopted	Adopted
Philadelphia Fire Underwriters Association	Continue	Adopted
	1910 Edition with 25% reduction	
Philadelphia Suburban Underwriters Association	Adopted	Adopted
Board of Fire Underwriters of Allegheny County	Adopted	Adopted
Association of Fire Underwriters of Baltimore City	Not Adopted	Adopted
	Situation Satisfactory	
Underwriters Association of D. C.	Not Adopted	Adopted
	Situation Satisfactory	
New Hampshire Board of Underwriters	Adopted	Adopted
South-Eastern Underwriters Association	Adopted	Adopted
Louisiana Fire Prevention Bureau	Adopted	Adopted
Western Actuarial Bureau	Adopted	Adopted
	(Except Kansas)	
Board of Fire Underwriters of the Pacific	Adopted	Under Consideration
Washington Surveying & Rating Bureau	Adopted	Prohibited by law
Oregon Insurance Bureau	Adopted	No pressing need
Arizona Equitable Rating Office	Adopted	Adopted
Idaho Surveying & Rating Bureau	Adopted	No pressing need
New England Exchange	Not Adopted	Adopted
Boston Board of Fire Underwriters	Not Adopted	Adopted
Insurance Association of Providence ...	Not Adopted	Adopted
Schedule Rating Office of N. J.	Adopted	Prohibited by law from combining fire and explosion
West Virginia Inspection Bureau	Adopted	Adopted
Arkansas Fire Prevention Bureau	Not Adopted	Not Adopted
	Condition satisfactory	
Texas	In process	In process
Mississippi	In process	In process

Public Service Securities for Institutional Funds

From "Tests of a Public Utility Bond," Blodgett & Co., New York

INSTITUTIONAL buyers have long felt the need of fully developed and clearly defined standards which would guide them in their task of selecting public utility bonds for investment. In the absence of such assistance, some of them have done pioneer work in this field of investment, revising their standards in the light of their growing experience and the limitations imposed by scattered legislative enactment.

Although this process is still going on, there is at last available a sufficiently large accumulation of experience and statute to make possible a survey of the extent to which safeguards have been developed which have been tested and found adequate. The need of such an analysis is emphasized by the rapidly increasing institutional interest in utility bonds, the growing importance of these securities in the investment field and the fact that even experienced buyers have been hampered in their purchases by the lack of generally accepted canons of safety.

Almost unknown in the investment lists of savings banks and insurance companies ten years ago, the suitability of utility bonds for this purpose is now indicated by their recognition under the savings bank laws of twelve states and by their purchase in large volume by insurance companies last year.

A reflection of this general trend is to be found in the fact that between 1917 and 1922 the par value of public utility bonds held by banks and trust companies, according to the reports of the Com-

troller of the Currency, increased approximately 43 per cent, as compared to an increase of 32 per cent for all other classes of bonds.

Many states still bar savings bank investment in public utility bonds and among the most important of these are Massachusetts and New York, with an aggregate of over 4½ billions of savings bank deposits. In these states, however, legislation looking to the lifting of this ban has been initiated by the savings banks themselves and is now receiving very careful consideration, although it is not possible at this time to determine the likelihood of its final enactment.

This growing institutional interest, which includes in its scope colleges and trust funds as well as insurance companies and savings banks, has been accompanied by the increasing prominence of the public utility security in the investment field, a prominence which the institutional buyer is forced almost daily to consider.

It has been estimated that five years ago the par value of bonds and notes sold by the public utility companies of the United States amounted to over \$425,000,000; three years ago to \$545,000,000 and last year to more than \$875,000,000.

A careful student of the subject has estimated that over the next decade the public utilities will need to raise for property additions and betterments over six billion dollars. This is not surprising in the light of the scope of this industry.

Not who owns the utilities, but how they are operated, is the real question to the consumer.

Purchasing Agents Welcome A. G. A.

THE Accounting Section of the American Gas Association was represented for the first time this year in the meetings of the Public Utility Group of the National Association of Purchasing Agents held in Pittsburgh on February 12 and 13.

There were 53 registered representatives of public utility companies in attendance at the meetings, including 14 from New York, seven from Pennsylvania, seven from Ohio, six from Michigan, five from Massachusetts, three from Illinois, three from West Virginia, two from Missouri, and one each from Minnesota, Georgia, Kentucky, Maryland, Washington, D. C., and Quebec, Canada.

A. F. Macklin, of the Consolidated Gas Company of New York, who represented the A. G. A., reported to the chairman of the Accounting Section that the meeting, which was one of the most successful in the history of the National Association, enthusiastically welcomed the participation of the gas industry and expressed the appreciation of the purchasing agents of the genuine interest which the A. G. A. showed in their proceedings.

Mr. Macklin explained to the meeting the lines along which the co-operation of the A. G. A. is being considered, and pointed out that a paper on purchasing will probably have a place in the program of the Accounting Section at the next gas convention in October. He also suggested that the purchasing agents' association could best show its desire to work with the A. G. A. by having representatives at the convention in Atlantic City to take part in the discussion on the proposed paper. The association placed itself on record as very eager to do this, and expressed the hope for continued co-

operation from the A. G. A. by cross representation on committees.

The following subjects were discussed by the Public Utility Group:

"The Viewpoint of the Purchasing Agent in Public Utility Work"—By Albert B. Tenney, vice-president of Charles H. Tenney & Co.

"Price Records"—By F. A. Jordan, purchasing agent, Georgia Railway & Power Company, Atlanta, Ga.

"To What Extent is Local Buying Justified"—By P. M. Marshall, purchase supervisor, Western Electric Company, New York City.

"Testing of Materials"—By Edward T. Gushee, purchasing agent, Detroit-Edison Company, Detroit, Michigan.

"Buying Methods"—By Lewis C. Harkell, purchasing agent, Southern Canada Power Co., Montreal, Canada.

"Scrap Classification"—By George C. McClure, purchasing agent, American Rolling Mill Company, Middletown, Ohio.

INSURANCE COMPANIES PROFIT FROM UTILITIES

BONDS of public service companies held by 41 of the leading life insurance companies of the country have increased in value by more than \$100,000,000 since November, 1923.

According to an official report just made public by the Association of Life Insurance Presidents, public utility bonds were the only single class of securities held which increased over 1922, both actually, in dollar value, and relatively, on a percentage basis, compared to total assets.

In round figures, \$405,000,000 of public utility securities were held by 41 life insurance companies reporting 82% of all admitted assets of the life insurance companies of the country. Holdings of all life insurance companies can be safely estimated at between \$465,000,000 and \$470,000,000 of public utility bonds.

PUBLICITY AND ADVERTISING SECTION

F. L. BLANCHARD, Chairman

CHARLES W. PERSON, Secretary

A. W. HAWKS, Jr., Vice-Chairman

MANAGING COMMITTEE—1925

BEHNERT, J. M., Philadelphia, Pa.
 BODEN, A. W., Hastings, Neb.
 BURNS, J. J., St. Louis, Mo. (Missouri)
 CRAWFORD, F. D., Brookline, Mass. (Gas Sales of N. E.)
 CHASE, HARLOW C., Newark, N. J.
 COONEY, E. J., Lowell, Mass.
 COONEY, F. W., New York, N. Y. (Empire State)
 FURBER, R. E., San Francisco, Calif.
 FURBER, M. H., Fond du Lac, Wis.
 FRANKLIN, S. J., Millville, N. J. (New Jersey)
 GARDNER, E. F., Chicago, Ill.
 JAMES, F. A., Ottawa, Ont., Canada. (Canadian)
 LIGHT, W. R., Milwaukee, Wis. (Wisconsin)
 LINSBERRY, JAMES, Vancouver, B. C.
 LIVINGSTON, R. E., New York, N. Y.

LUCAS, JOHN PAUL, Charlotte, N. C. (Southern)
 MCKINNEY, C. B., Dallas, Texas. (Southwestern)
 MCMAHON, J. J., Cleveland, Ohio.
 MULLANEY, B. J., Chicago, Ill. (Illinois)
 MYERS, G. L., Portland, Ore.
 POTTER, CLYDE H., Los Angeles, Cal.
 RAY, DON, San Francisco, Cal. (Pacific Coast)
 RICHARDSON, J. S. S., Philadelphia, Pa. (Pennsylvania)
 SCRANTON, GEORGE H., Derby, Conn. (N. E. Gas Engrs.)
 SHUFF, J. E., Lincoln, Neb. (Iowa)
 SPRAGUE, L. D., New Albany, Ind. (Indiana)
 STARR, L. K., Atlanta, Ga.
 STEELE, OMAR F., Mount Clemens, Mich. (Michigan)
 WATT, A. C., New York, N. Y.

Publicity Activities Extended

FIGURES announced at the March 10th meeting of the Managing Committee of the Publicity and Advertising Section show that gas company members of the Association are devoting more attention to publicity activities than ever before.

One striking evidence of a more enlarged, intensified and sustained use of the printed word in the cultivation of better public relations is in the amount of literature purchased from headquarters for distribution to customers. In the period extending from January 28 to February 13, the Section brought out one new folder entitled, "Gas in the Service of Man," and issued sample copies of its earlier pamphlets entitled, "Truths About the Meter" and "Hints for the Housewife." Sales for the period mentioned above were as follows:

"Gas in the Service of Man"	262,000
"Hints for the Housewife"	35,700
"Truths About the Meter"	7,200
Total	304,900

This literature is still being purchased in large quantities. Before the summer the Section expects to report a sale of at

least one million copies of the "Hints" and "Truths" pamphlets combined.

Other publicity activities of the Section have shown a noteworthy support. The advertising service, issued monthly, is growing steadily, and increased demands are being made for the lecture on gas and the motion picture film, the latter now attracting the attention of schools and colleges.

News developments arising out of the Pacific Coast Conference were broadcast by the Associated Press to its 1,200 member newspapers, and the stories were used in generous measure by the press, resulting in favorable editorial comment. The Association does not distribute its news articles direct to the newspapers, except upon solicitation, but issues on the average of five stories a week to the 27 committees on public utility information who, in turn, use a majority of the news material issued by the Association in their bulletins, which go to all newspapers in their respective localities. This arrangement is not only productive of good results locally, but it ties in nicely with a national educational movement of acknowledged merit.

Within recent weeks the Section has centered its attention on industrial gas news material, working in close touch with the Publicity Committee of the Industrial Gas Section. A good industrial gas story, therefore, gets a thorough distribution through the channels of the state committees, and, what is equally as important, a direct distribution to all trade publications interested in the particular material issued. Not only do the trade papers publish such material, but they ask for more. This shows that the field of industrial gas publicity is a virgin one full of promising possibilities.

Frank L. Blanchard, chairman of the Managing Committee, announced that the Section's connection with the publication of the American Gas Association MONTHLY would be through an Advisory Committee, consisting of Arthur W. Hawks, Jr., of Baltimore; J. M. Bennett, of Philadelphia, past chairman of the Section; E. F. Gardiner, of Chicago; Harlow C. Clark, of Newark, N. J., and Mr. Blanchard, chairman. A preliminary meeting of the committee has been held and many suggestions made for improving the magazine.

At the convention of the Associated Advertising Clubs of the World, to be held at Houston, Texas, in May, the Public Utilities Advertising Association, a departmental of the national organization, will exhibit samples of the latest and best public relations and institutional advertising copy. The Publicity and Advertising Section is in charge of the exhibit of gas company advertisements.

UTILITY MEN TO ATTEND ADVERTISING CONVENTION

WILLIAM H. HODGE, of Chicago, President of the Public Utilities Advertising Association, states that a delegation of one hundred advertising men in the employ of public service companies will at-

tend the Houston convention of the Associated Advertising Clubs of the World on May 10 to 15.

The utility men will have two sessions of their own. Subjects to be discussed are: "Costs and Results," "Better Copy," "Keeping an Organization Abreast of Its Advertising," "Motion Pictures," and "Good Will and Institutional Advertising." A feature of the convention will be a large display of the latest and most effective public utility advertising, collected and exhibited under the auspices of the Public Utilities Advertising Association.

A NEW ENTRY

THE FIRST ISSUE of an attractive house organ—"The Blue Flame"—has come from the Fall River Gas Works Company. H. Koch, Jr., of the advertising department is the editor, and his assistants have been taken from various departments, such as manufacturing, distribution, accounting and sales.

While turning out an attractive eight-page publication, the editors have very wisely begun with simplicity as their guidestone. We shall watch the progress of the new periodical with interest.

A CORRECTION

THROUGH AN INADVERTENCE Mrs. Ethel M. Wood, whose interesting American notes appeared in the February and March numbers of the MONTHLY, was described as a representative of the British Commercial Gas Association. Mrs. Wood, who is a director of an advertising agency, was not officially representing our British confreres, but having done special work for the industry in the British Empire Exhibition at Wembley, was requested to report on certain phases of the American gas business.

MANUFACTURERS SECTION

WENDELL L. SMITH, Chairman

W. E. DERWENT, Vice-Chairman

C. W. BERGHORN, Secretary

MANAGING COMMITTEE—1925

AARON, C. T., Newark, N. J.
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 BRAN, G. W., Washington, D. C. (Southern)
 BROS. HOWARD, Baltimore, Md.
 DUNWERT, W. E., Rockford, Ill. (Wisconsin)
 HAMILTON, P. H., Cleveland, O.
 HARRIS, G., Toronto, Ont., Canada. (Canadian)
 HOLLANDER, A. L., Chicago, Ill. (Indiana)
 JEFFERSON, W. H., New York, N. Y.
 JOHNSON, E. J., New York, N. Y.
 LEHR, F. A., Kalamazoo, Mich.
 LOVE, JOHN, New York, N. Y.

MCDONALD, DONALD, New York, N. Y.
 MUELLER, R., Decatur, Ill.
 NORTON, A. E., Boston, Mass. (N. E. Gas Engr.)
 OSTERMAN, P. C., Elizabeth, N. J.
 RAMBERG, C. J., Pittsburgh, Pa.
 ROPER, GEO. D., Rockford, Ill. (Illinois and Iowa)
 SHIDENGLAND, C. H., Dallas, Texas. (Southwestern)
 SEAVER, KENNETH, Pittsburgh, Pa.
 STILES, TOWNSEND, Gloucester, N. J.
 STOCKSTROM, A., St. Louis, Mo. (Missouri)
 WELLS, F. K., Boston, Mass. (Gas Sales of N. E.)
 WESTON, J. A., Detroit, Mich. (Michigan)
 WHITELAW, H. L., New York, N. Y.

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Exhibition—WENDELL L. SMITH, Battle Creek, Mich.
 Insulating—GEO. W. PARKER, St. Louis, Mo.
 Laboratory Equipment—DONALD McDONALD, New York, N. Y.
 Division of Accessories Manufacturers—R. MUELLER, Decatur, Ill.
 Division of Apparatus & Works Manufacturers—JOHN LOVE, New York, N. Y.
 Division of Gas Range Manufacturers—CHARLES T. AARON, Newark, N. J.
 Division of Heating Appliance Manufacturers—H. L. WHITELAW, New York, N. Y.

Division of Industrial Appliance Manufacturers—P. C. OSTERMAN, Elizabeth, N. J.
 Division of Lighting Appliance Manufacturers—TOWNSEND STILES, Gloucester, N. J.
 Division of Meter Manufacturers—W. H. JEFFERSON, New York, N. Y.
 Division of Office Labor Saving Devices—H. J. JOHNSON, New York, N. Y.
 Division of Supply Manufacturers—KENNETH SEAVER, Pittsburgh, Pa.
 Division of Water Heater Manufacturers—P. H. HAMILTON, Cleveland, O.

Increasing Sales of Industrial Appliances

Booklet Series Form Excellent Medium

WHILE the growing use of gas in industry made it desirable to separate the Manufacturer's Section from the Industrial Section in order to facilitate the work of the Association, such a step did not imply that there would not continue to be the closest kind of co-operation between the two sections. A great many recent activities testify to this and now the Industrial Section wishes to provide another opportunity to those members of this section who may be interested in industrial appliances.

The third volume of the Industrial Gas Series is just off the press. It deals with the use of gas for all kinds of baking—bread, biscuits, cakes, crackers, pies, and ice cream cones—and the use of gas in hotels and restaurants for every kind of commercial cooking, as well as considerable material of general interest in these

fields. The book gives detailed information on loads, designs, conversions, layouts and many convincing selling points. It is an official reference volume, paving the way for an intensive cultivation of the wide-open sales opportunities existing in this broad field.

The purchasers of this book, as well as those who have purchased either "House-Heating" or "Combustion," constitute a group thoroughly sold on the idea of using gas industrially. What they need in addition to the technical information contained in these volumes is to know where they can obtain the equipment which has been discussed there.

These men want to know about industrial appliances; they want to know how appliance costs compare; they want to know the exact structural differences between the different makes of any one ap-

pliance. This they can only learn from equipment catalogues which they may or may not have conveniently at hand. These books provide an excellent place in which to put this information. The backs have been designed to hold loose-leaf advertising sheets which all manufacturer members are invited to prepare in accordance with the specifications below.

The recipients of these and subsequent books form a "preferred" list for sending advertising matter because these men have already signified their interest in the various industrial fields. In fact it is difficult to imagine a more advantageous medium for advertising, particularly since it will be offered free of charge, except for the cost of printing the sheets, which is left to the manufacturer. The amount of material sent is left to the discretion of the individual companies; some have prepared very elaborate sections, running up to twenty sheets or more, while others have felt that a single page sufficed for their needs.

The Association will be pleased to supply member manufacturer companies, who signify their intention of printing advertising catalogue sheets, with complete lists of purchasers of books of the Industrial Series. These lists are supplemented from time to time as additional books are sold.

The specifications of the advertising sheets are as follows:

1. *Paper:* Do not exceed in weight paper of 50 pounds per ream (Sheet size 25" x 38"). Use any color or kind of paper desired.

2. *Printing:* Confine type limits to size 6" x 9". Use any color or colors of ink desired. An identification box is to be printed in the upper right hand corner of the sheet indicating the volume for

which the sheet is intended, as for example:

*Bakeries Hotels and Restaurants
Industrial Gas Series*

This may be printed outside of the type limits.

The reverse side of the sheet can also be utilized, and, when doing so, print with the holes at the bottom to conform with the method of opening this section of the books.

3. *Punching:* Punch all sheets with two (2) $\frac{1}{4}$ " round holes in the top margin, 3" center to center, $\frac{3}{8}$ " from top edge to the center of the holes and $2\frac{3}{8}$ " from the side edges to the center of the holes.

4. *Shipping:* In shipping these sheets *should not be folded* as they are to become permanent pages in the book.

DID YOU GET YOURS?

THE CLASSIFIED DIRECTORY of Manufacturers of Gas Equipment and Appliances which accompanies this issue of the MONTHLY represents a service of considerable value to our manufacturer members.

The Directory, however, can only be of maximum use if the information carried therein is reliable. Our members are, therefore, urged to furnish headquarters with all information pertinent to and of a nature to be included in this pamphlet. We shall be glad upon request to include captions in addition to those now carried.

To derive the full benefit from the Directory our manufacturer members should furnish us with a complete list of their products and trade names of interest to the gas industry.

Service consists in giving light, not in theory, but on the page; heat, not only expended, but felt; power, not merely potential, but realized.

INDUSTRIAL GAS SECTION

H. O. LOEBELL, Chairman

C. W. BERGHORN, Secretary

F. F. CAULEY, Vice-Chairman

MANAGING COMMITTEE—1925

ALLINGTON, J. B., Rochester, N. Y.
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CARR, H. H., Chicago, Ill. (Illinois)
DE CAROLIS, E. G., Boston, Mass.
DEFRAYAS, W., New York, N. Y.
GERS, J. H., San Francisco, Cal.
HARRIS, D. J., York, Pa. (Pennsylvania)
HUNT, H. M., New York, N. Y.
HUTCHINSON, W. M., New York, N. Y.
HUTCHINSON, C. A., Pawtucket, R. I. (Gas Sales of N. E.)
KELLEY, H. B., St. Louis, Mo. (Missouri)
KELLEY, R. J., Texarkana, Tex. (Southwestern)
KRAUSE, C. C., Baltimore, Md.
LEIBROTH, J. P., Newark, N. J.
MATTNEY, F. X., Hammond, Ind. (Indiana)

MORRHEAD, JR., I. H., Atlanta, Ga. (Southern)
MUEHLBERG, C. E., Denver, Col.
PETERSON, C. G., Providence, R. I.
QUINN, J. E., Brooklyn, N. Y.
QUINN, J. J., Quincy, Mass. (N. E. Gas Engrs.)
RAMSAY, E. E., Philadelphia, Pa.
SCHUYER, A. A., Milwaukee, Wis. (Wisconsin)
SELLMAN, N. T., New York, N. Y.
SLIMPIN, C. D., Montreal, Canada. (Canadian)
SMITH, H. H., Boston, Mass.
SPARK, C. R., Davenport, Iowa. (Iowa)
STEFAN, E. J., Pittsburgh, Pa.
THOMPSON, W. D., St. Louis, Mo.
WATSON, H. E. G., Toronto, Ont., Canada.
WHITWELL, G. E., Tacoma, Wash. (Pacific Coast)
YOUNG, R. R., Newark, N. J. (New Jersey)

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Advertising—F. F. CAULEY, Chicago, Ill.
Contact with Committee on Cooperation with Educational Institutions—J. J. QUINN, Quincy, Mass.
Education of Industrial Salesmen—J. P. LEIBROTH, Newark, N. J.
Nominating—H. H. CLARK, Chicago, Ill.

Policy—F. F. CAULEY, Chicago, Ill.
Progress—C. C. KRAUSE, Baltimore, Md.
Publicity—H. O. ANDREW, New York, N. Y.
Rates—H. O. LOEBELL, New York, N. Y.
Research—J. B. ALLINGTON, Rochester, N. Y.
Survey—R. E. RAMSAY, Philadelphia, Pa.

A Permanent Program of Publicity

By H. O. ANDREW, Chairman of the Publicity Committee

THE need for a well defined plan of publicity, both within and outside of the industry, is most imperative at the present time if the use of gas industrially is to take its rightful place. Recent articles on the use of electrical heat in such publications as the Scientific American and full page advertisements in the Saturday Evening Post must surely awaken the gas industry to the need of going after the industrial heating business in a forceful manner now.

In spite of its many advantages, the gas lighting business was fought for after it was too late. Are we going to allow the industrial business to go the same way? It is not enough to know that gas is the economic fuel, and stop. This is a period of intense competition for the consumer's dollar. We must present the advantages and economy of our product if we expect to obtain the busi-

ness. We must use the modern weapon of publicity, or see other fuels take the place which should be occupied by ours.

Our Publicity Committee has a definite program which is actively functioning. The heat users of all industries are being reached through the Industrial Gas magazine. This work is being carried further by having articles republished in other business publications. Since the first of this year such papers as Iron Trade Review, Candy Factory, The Wood Worker, American Furniture Manufacturer, Brass World, Confectioners' Journal and many others have republished such material. Original articles on industrial gas utilization in specific fields are also being prepared for other papers. The journals in our own field are carrying more and more industrial material, both in their editorials and in their general articles.

THE SAFETY FIRST POWER

The same Electric Heat that does the ironing—



—is rapidly becoming AN INDUSTRIAL GIANT

The household has long known and appreciated the safety of electric heat. It is clean, hot, efficient, and it costs less than any other method of heating.

The same clean, safe, efficient, and economical electric heat is now being used in industry. In thousands of plants it is helping to save fuel, produce and conserve quality of products—because it can be safely and economically controlled.

It is further the most reliable and efficient method of heating in any case the development by Westinghouse of the alternating current system.

There are many varieties of its use based on the safe and efficient design. I believe something has not investigated the possibilities of the new electric heat in any industry.

Westinghouse

Local Mediums Are Best in Approaching Domestic Customers. But the Industrial User Must Be Reached on a National Scale.

New Rates Must Precede Progress

By H. O. LOEBELL, Chairman of the Sub-Committee on Rates and Rate Structure

THE Sub-Committee on Rates and Rate Structure of the Industrial Gas Section has had under consideration up to the present time the value of the differential rate as a means of obtaining business and strengthening the position of the gas companies in relation to their competitors.

A study of the present industrial situation has brought the Committee to the conclusion that the immediate adoption of a Readiness-to-Serve rate, similar to the one used by electric companies, is most essential to progress in the gas business. The reasons for this are as follows:

1. Industrial consumers feel justified in securing all the advantages which normally accrue from large volume business

To be successful our committee felt that their work should be so organized as to be carried out in a regular and continuous manner, and not with an occasional spurt now and then. In this connection interesting, novel and unusual applications of gas in industry are being furnished the various Public Utility Information Bureaus as a regular release of the A. G. A. Publicity and Advertising Section. In turn the releases of these bureaus will mean the spreading of this information to the newspapers, trade papers, etc.

The work of the Publicity Committee of the Industrial Section is limited only by the quality and amount of material made available. It is the duty of every industrial gas man to cooperate with us in presenting our story to the general public as well as to their own local executives, and it is the duty of executives to give careful study to the possibilities of the industrial gas business.

and good load factors, and, as the competition between gas and other fuels is very keen, it is up to the gas industry to create a rate which is competitive as well as within the range of good business.

2. A small per cent reduction on blocks of large consumption has proven inadequate, because it does not premiumize the high load factor business, and it is this business which the competitors of gas usually go after.

3. The electric people, through the use of the differential system of rates, are gaining much headway in taking on the industrial load. The industries look upon gas costs as made up of the same factors as those of electricity, and would, therefore, look with favor upon a similar rate structure.

With all these points in favor of the differential rate, the question then arises

"Why have the gas companies held back so long?"

The answer is rather difficult to explain. One of the greatest obstacles is the immediate loss of revenue from present customers of the gas companies who are purchasing large quantities of gas and are satisfied to pay present rates; any change in rate schedule would force a reduction in revenue from them.

However, the executives of the gas companies should look at this problem in the following light. If the present rate structure is maintained, new business will become more difficult to obtain and old business hard to hold, whereas, if a reduction of revenue is accepted for a time, and the rates adjusted on a permanent basis of cost, it will prove much more advantageous in the long run.

Then again, the electric companies seem to be more progressive than the gas companies in adopting new systems; even in combination gas and electric properties, we find the electric companies are invariably more disposed to consider new rate structures and other means by which they can obtain new business. The gas

industry must wake up to its opportunities and go out after them.

The success gas companies have had, where the differential rate has been established, is a proof of what can be done. Several members of the Committee have cited instances where phenomenal progress has been made by companies which have adopted a schedule which makes possible lower unit costs for consumers who have high load factors and use large quantities of gas.

It rests with the gas companies to bring about a general adoption of the differential rate. The work of the Committee will be directed along the following lines:

1. Attracting the attention of the management of the gas properties to the seriousness of the situation that is developing in industrial cities owing to their indifference to the importance of differential rates in getting industrial business.

2. Urging the gas companies to adopt a differential rate in their communities, not only because it will obtain business for them on a permanent basis, but because it will also make it possible for them to enlarge the scope of their work and take on larger and larger business.

Training Men Who Can Sell

By J. P. LEINROTH, Chairman of the Committee on Education of Industrial Salesmen

IN endeavoring to carry out one of the activities proposed as part of the year's work of the Industrial Gas Section, a Committee on Education of Salesmen has been formed. The function of the Committee, as its name implies, is to effect a plan for the higher development of the men who sell gas to the industries.

The ways and means of getting this load on our lines should be carefully studied. The principal cog in the wheel is the industrial gas engineer. If, therefore, we are vitally interested in getting this business, it would seem that the problem of the training of the industrial gas

engineer is one of great importance to the gas companies both as a whole and individually.

It is being repeatedly pointed out that the opportunities for the sale of gas to industries will become greater and greater owing to the future economic aspect, which will insist more and more on conservative use of our solid fuels, and will take into consideration the diminishing supply of oil and the relation of fuels to health and other factors. Will the gas companies be prepared to take advantage of the situation? The answer to this question will largely depend on how well

they have prepared themselves—how well they have trained men as industrial gas engineers who will be wide awake to the opportunity and be competent to take advantage of it.

The charge is often brought against the industrial gas engineer that he is developed technically and mechanically but not at all in salesmanship. Unfortunately, this is very largely true. But, if there is one thing that is needed in the industrial end of the gas business today, it is men who can sell. We have only recently started to formulate plans for soliciting this business on a scientific basis.

The Committee on Education of Salesmen believes that the selecting, training and educating of our industrial gas engineers presents to us a problem of great importance and one which holds forth great possibilities.

Questionnaires are now being made up to send out to both gas companies and companies outside of the industry who have given this problem considerable thought. It is hoped thereby to get the opinion of those in the gas industry who have given this problem their thought, as well as get the experience of the companies outside of the industry. The Committee will, from their studies of this problem, recommend a specific plan for the selection, development and training of industrial gas engineers.

The Committee is also working on a plan with the appliance manufacturers whereby a course of instruction in industrial gas will be offered to the gas companies for the educating of their industrial men.

INDUSTRIAL GAS COURSE

ANNOUNCEMENT HAS BEEN MADE that the 1925 Industrial Gas Class, sponsored by the several New England gas associations, will again be held at the Massachusetts Institute of Technology for the two weeks commencing June 22nd. There

will be separate lectures for the first and second year students. Members of the faculty of the Institute and experts from the industry will present the lectures on subjects of particular value to anyone interested in the industrial application of gas. It is hoped that the men attending outside of Metropolitan Boston will secure reservations at the Riverbank Court Hotel, which is located on the Charles River Parkway, across from the Institute buildings. Further information regarding this course may be obtained from John J. Quinn, Vice-President, Quincy Gas Light Company, Quincy, Massachusetts.

STEEL TREATERS MEET

THE SPRING SECTIONAL MEETING of the American Society for Steel Treating will be held in Schenectady, May 28, 29 and 30. Headquarters are at the Hotel Van Curler.

The annual convention and National Steel Exposition of the society will be held in the Public Auditorium, Cleveland, Ohio, week of September 14. Requests for further information may be addressed to W. H. Eiseman, secretary, 4600 Prospect Ave., Cleveland, Ohio.

CUTTING AND WELDING

AT THE LAST MEETING of the Managing Committee of the Industrial Gas Section it was agreed that the use of manufactured gas for cutting and welding offered a field of development worthy of much concentrated research. This problem has accordingly been submitted by the Research Committee to manufacturers for study. Information is also being obtained by the Committee on the application of gas in the rubber tire industry, steel melting, non-ferrous metal melting, pipe bending and glass annealing, and where new developments are needed these problems will also be submitted to the manufacturers.

COMMERCIAL SECTION

J. P. HANLAN, Chairman

R. L. BURDICK, Secretary

J. B. MYERS, Vice-Chairman

MANAGING COMMITTEE—1925

ADAMS, W. A., Chicago, Ill.
 ANDERMAN, RAY, Jenkintown, Pa.
 ATWOOD, B. H., Wilmington, Del.
 BAILEY, E. P., Jr., Cleveland, Ohio.
 BARTLETT, C. E., Philadelphia, Pa.
 BATES, S. F., Macon, Ga.
 BIRKS, E. J., Indianapolis, Ind. (Indiana)
 BIRKS, J. J., St. Louis, Mo.
 CANNIFF, R. J., Poughkeepsie, N. Y.
 CANNIFF, FRANK, Boston, Mass. (Gas Sales of N. E.)
 CASE, J. C. D., Boston, Mass.
 CHAT, NOBLE L., Winston-Salem, N. C.
 CONNET, E. J., Lowell, Mass.
 COLE, WILEY F., St. Louis, Mo. (Missouri)
 CRAWFORD, J. WARD, Allentown, Pa. (Pennsylvania)
 DAVIS, J. L., Chicago, Ill.
 GAYSON, J. LUTHER, Birmingham, Ala. (Southern)
 GAYSON, WM., Boston, Mass.
 GRANT, STANLEY, Philadelphia, Pa.
 HAYES, D. W., Detroit, Mich. (Michigan)
 HEWEN, A. W., New York, N. Y.
 JOHNSON, W. B., Toronto, Ont., Canada. (Canadian)

JONES, JACOB B., Bridgeton, N. J. (New Jersey)
 KARSHNER, G. M., New York, N. Y.
 KENNEDY, THOS. F., New York, N. Y.
 KEYS, HARVEY A., Pittsburgh, Pa.
 KLOFF, G. C., Chicago, Ill. (Illinois)
 LITTLE, STANLEY E., Lorain, Ohio.
 LUTHER, C. A., Chicago, Ill.
 MARTIN, E. H., Des Moines, Iowa. (Iowa)
 MORRIS, W. A., Brooklyn, N. Y.
 NORTH, M. F., Fort Wayne, Ind.
 PHENICIE, C. R., Green Bay, Wis. (Wisconsin)
 POST, A. P., Philadelphia, Pa.
 REAGAN, W. J., Utica, N. Y. (Empire State)
 SMITH, DONSEY R., Baltimore, Md.
 STOTH, LOUIS, Philadelphia, Pa.
 SWANN, ADA BESSIE, Newark, N. J.
 TUBBURY, JOHN L., Salem, Mass. (N. E. Gas Engrs.)
 VALENTINE, H. D., Chicago, Ill.
 WARDELL, C. W., Philadelphia, Pa.
 WHITWELL, G. E., Tacoma, Wash. (Pacific Coast)
 WISKE, P. B., Brooklyn, N. Y.

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Architects and Builders—W. A. ADAMS, Chicago, Ill.
 Gas Refrigeration—H. D. VALENTINE, Chicago, Ill.

Home Service—MISS ADA BESSIE SWANN, Newark, N. J.
 Sales Stimulation—R. J. CANNIFF, Poughkeepsie, N. Y.

1925 Sales Program Endorsed

Fifty Per Cent Increase in Three Years Is Goal

THE Executive Board has endorsed the plans of the Commercial Section for the continuance during 1925 of the definite program for increasing the sales of gas and appliances by 50 per cent in three years.

The success of the entire plan rests upon the proper organization of gas company and appliance manufacturers' sales efforts into a co-operative sales program, and depends upon the whole-hearted support of gas companies and appliance manufacturers who are members of the American Gas Association.

The sales effort for the next three years is to be largely built around the Monthly Sales Stimulation Service which will supply month-by-month material for the successful operation of all domestic sales activities of participating companies.

As a result of experience during the

past year the Sales Stimulation Committee will greatly enlarge and extend the scope of this service to make it of more practical help to the gas company sales forces without increasing the price of the service.

The organization to administer this program will consist of the Commercial Section as the national directing body, and regional councils made up largely of the executives of state and regional affiliated associations.

The plan also includes the holding of at least three regional sales conferences in different sections of the country similar to that held at Millbrook in 1924, for the purpose of assisting the local companies to put the program into practical operation.

The Section also plans the publication of a salesman's manual for the informa-

tion and guidance of the men actively engaged in the domestic sales of gas.

The program for the first year will consist of perfecting the organization, enlisting the support of gas companies and manufacturers in the plan and in so stimulating their interest in these activities and co-ordinating their efforts in a national sales program that this plan may be properly executed.

Details of the entire program are being worked out and will be supplied shortly to members in booklet form.

British Companies "Sold" on Publicity

THAT the net result of nothing is approximately nothing has long been the practical theory of our English friends.

For the Gas Exhibit at the British Empire Exhibition at Wembley in 1924, the Gas Exhibit Committee and the Executive Board of the National Gas Council asked, and got, from British gas companies subscriptions based on six shill-

ings per million cubic feet of gas sold. For the Gas Exhibit for 1925 only three shillings per million cubic feet has been asked.

The Gas World, from which the above cartoon was taken, believes that this reduction in expenses for publicity of this character is a great mistake. The National Gas Council, on the other hand, evidently believes that it is less expensive to carry on such a program than it is to inaugurate one, and undoubtedly there is some truth in the theory.

At any rate, everyone seems to be convinced that, while the "crop" may not always be in exact ratio to the amount of "seed" that is sown, a considerable amount of money and effort must be expended before any kind of results can be achieved.

Nothing from nothing is always a workable equation.

SLOGAN CONTEST EXTENDED

THE HOME SERVICE COMMITTEE of the Commercial Section announces an extension of the time limit of the Home Service Slogan Contest until April 30, 1925. The purpose of this contest is to obtain a slogan which will best express the purpose and value of home service work to the industry, the community and the consumer.

It should be borne in mind that the aim of the Committee is more to use this slogan in promoting home service work with *gas people* and not so much to address it to the public.

A number of entries have been received but the Committee urges a greater participation in the contest. The winning competitor will receive twenty-five dollars in cash. Any number of suggestions may be submitted and should be addressed to the Commercial Section, American Gas Association, 342 Madison Avenue, New York, N. Y.



A Crop That Didn't "Come a Cropper"

TECHNICAL SECTION

R. C. CORNISH, Chairman

J. P. HAFTENKAMP, Vice-Chairman
H. W. HARTMAN, Secretary

MANAGING COMMITTEE—1925

HAYES, H. E., Chicago, Ill. (Illinois)
 BRECKENRIDGE, W. C., New York, N. Y.
 BROWN, W. A., St. Louis, Mo.
 BENTON, N. B., Bristol, Pa. (Pennsylvania)
 BROWN, J. A., Jackson, Mich. (Michigan)
 BUCKENSTEIN, R., Pawtucket, R. I. (Gas Sales)
 BUCKENSTEIN, R. H., New York, N. Y.
 CARTER, JR., R. A., New York, N. Y.
 COOK, JR., H. R., Baltimore, Md.
 COOPER, H. C., Pittsburgh, Pa.
 EVANS, GEO. B., St. Louis, Mo.
 FISH, H. C., Sedalia, Missouri. (Missouri)
 FISH, H. C., Pittsburgh, Pa.
 FISHER, F. C., Providence, R. I. (N. E. Gas. Engrs.)
 HOT, C. W., Glassboro, N. J. (New Jersey)
 HUMPHREYS, J. J., Montreal, Quebec, Can. (Canadian)

INGWALL, F. F., Binghamton, N. Y. (Empire State)
 KELLY, T. J., Ft. Wayne, Ind. (Indiana)
 KIRCH, L. A., Chicago, Ill.
 LEVAN, D. H., Savannah, Ga. (Southern)
 LYONS, B. F., Beloit, Wis. (Wisconsin)
 MORRIS, W. R., Jersey City, N. J.
 MURPHY, F. D., Houston, Texas. (Southwestern)
 PERRY, J. A., Philadelphia, Pa.
 PORTER, R. G., Chester, Pa.
 SEYMOUR, F. W., Battle Creek, Mich.
 SNYDER, A. I., Detroit, Mich.
 STRENG, L. S., Louisville, Ky.
 VITTINGHOFF, H., Boston, Mass.
 WEBER, F. C., New York, N. Y.
 WILLIAMS, C. T., Sioux City, Iowa. (Iowa)
 WILLIAMS, L. J., Boston, Mass.
 YARD, W. S., San Francisco, Cal. (Pacif Coast)

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Carbonization—A. M. BREWER, Rochester, N. Y.
 Cast Iron Pipe Standards—WALTON FORSTALL, Philadelphia, Pa.
 Condensing and Scrubbing Committee—D. W. FLOWERS, St. Paul, Minn.
 Chemical Committee—A. F. KUNERGER, Philadelphia, Pa.

Distribution—H. E. BATES, Chicago, Ill.
 Measurement of Large Volumes of Gas—M. E. BREWER, Chicago, Ill.
 Nominating—L. J. WILLIAMS, Boston, Mass.
 Revision of Catechism—W. J. SERRILL, Philadelphia, Pa.
 Water Gas—J. H. WARRICK, Elrama, Pa.

Condensing and Scrubbing Committee to Study Data

IT has been definitely decided that the work of the Committee on Condensing and Scrubbing this year shall confine itself to the presentation of data secured by last year's committee and to draw as many conclusions as possible from this data.

Therefore, the Committee will not send out a second questionnaire, nor ask for further data except from specific tests as may be necessary after a study of the questionnaire returns. The Committee realizes that it will not be possible to cover the entire subject in the present year's report, and in view of the fact that a paper on washer coolers was presented to a former convention, the Committee for the present year will concentrate on tubular condensers.

The sub-committee on Economies of Layout and Design of a Modern Tubular Condenser will consist of the following:

J. S. Haug, *Chairman*, the U. G. I. Contracting Co., Philadelphia, Pa.
 P. F. McEneny, Electric Bond & Share Co., New York, N. Y.
 I. T. Haddock, Cambridge Gas Light Co., Cambridge, Mass.
 Bruno Rahn, Milwaukee Gas Light Co., Milwaukee, Wis.

The following program of work has been decided upon to be handled by the following sub-committees:

Sub-Committee on Theory of Heat Exchange and Condensation

W. J. Huff, *Chairman*, Johns Hopkins University, Baltimore, Md.
 Prof. O. L. Kowalke, University of Wisconsin, Madison, Wis.
 Prof. Alfred H. White, University of Michigan, Ann Arbor, Mich.

This sub-committee will make such examination of technical literature bearing on this subject as may be necessary to outline definitely the principles of theory involved.

Sub-Committee on Study and Presentation of Data Gathered by Last Year's Committee

- R. H. Burdick, *Chairman*, Electric Bond & Share Co., New York, N. Y.
 P. F. McEneny, Electric Bond & Share Co., New York, N. Y.
 Bruno Rahn, Milwaukee Gas Light Co., Milwaukee, Wis.
 J. H. Haug, U. G. I. Contracting Co., Philadelphia, Pa.
 S. B. Sherman, Wisconsin Gas & Electric Co., Racine, Wis.

This committee will check and study the data presented by the various companies in reply to the questionnaire submitted last year and make such presentation as possible of the results and conclusions that may be drawn therefrom. An attempt will be made to correlate the reports of this sub-committee with the Sub-Committee on Theory of Heat Exchange and Condensation.

The next meeting of the general committee will be called some time in May.

Tentative Program for Chemical Society Meeting

THE Gas and Fuel Section of the American Chemical Society will hold a series of meetings in Baltimore on Wednesday, Thursday and Friday, April 8, 9, and 10.

The following tentative program and preliminary announcement of papers have been drawn up:

Original Paper: A. C. Fieldner—"Some Personal Observations on Fuel Research in Europe"; Dr. Franz Fischer—Subject of paper has not been received. Dr. Fischer expects to sail from Germany for America about the middle of March; W. J. Huff—"A Detection of Traces of Carbon Disulphide in Small Gas Volumes"; D. J. Demorest—"Carbonization of Ohio Coals"; Jerome J. Morgan—"An Investigation of the Cautic Soda Process of Extracting Low Tem-

perature Phenols"; S. H. Katz—"Carbon Monoxide"; G. G. Brown—"Effect of Initial Conditions on Gaseous Explosions" (This may not be the exact title of the paper); E. W. Thiele, R. T. Haslam—"The Mechanism of the Steam-Carbon Reactions."

Symposium on Flames (One-Half Day)—S. W. Parr—"A Study of Gas Burners" (not exact title); E. W. Rembert, R. T. Haslam—"The Effect of Wall Temperature on the Rate of Combustion of City Gas"; E. W. Rembert, R. T. Haslam—"Factors Influencing the Height of the Cone Within the Bunsen Flame"; E. W. Rembert, R. T. Haslam—"Factors Influencing the Length of a Bunsen Flame"; E. W. Rembert, R. T. Haslam—"The Combustion of City Gas Burning in Secondary Air"; J. T. Ward—"Rate of Flame Propagation"; G. L. Clark, E. W. Brugmann, W. C. Thee—"Precision Experiments on the Effect of Knock Inducers and Suppressors upon Gaseous Ionization"; G. L. Clark, W. C. Thee—"The Present Status of the Facts and Theories of Detonation"; W. G. Lovell, T. A. Boyd—"Consistencies in the Analysis of Exhaust Gas from Gasoline Motors"; G. G. Brown—"Discussion of Propagation of Flames in a Closed Vessel" (not exact title); Informal discussion to be continued by W. J. Huff and others.

TESTS UNDER WAY

THE EXECUTIVE BOARD of the Association at its meeting on March 11th authorized an appropriation of \$4,000 to defray the expenses of the tests of carbonizing plants, plans for which were described in the March issue of the MONTHLY. Arrangements for carrying out these tests are being made by the Carbonization Committee under the direction of A. M. Beebe, chairman.

Associations Affiliated with A. G. A.

Canadian Gas Association

Date of Affiliation—Mar. 25, 1919.
 Pres.—E. R. Hamilton, Nova Scotia Tramways & Power Co., Halifax, N. S.
 Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
 Conv., Quebec, Que., July 15 and 16, 1925.

Empire State Gas and Electric Association

Date of Affiliation—Nov. 21, 1919.
 Pres.—M. S. Sloan, Brooklyn Edison Co., Brooklyn, N. Y.
 Chairman Gas Section—F. F. Ingwall, Binghampton Gas Works, Binghampton, N. Y.
 Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
 Annual Meeting, 1925.

Illinois Gas Association

Date of Affiliation—Mar. 19, 1919.
 Pres.—J. G. Learned, Public Service Co. of Northern Illinois, Chicago, Ill.
 Sec.-Treas.—R. V. Prather, 305 Illinois Mine Workers Bldg., Springfield, Ill.
 Chicago, Ill.

Indiana Gas Association

Date of Affiliation—April 24, 1919.
 Pres.—G. M. Johnson, Northern Indiana Gas & Electric Co., South Bend, Ind.
 Sec.-Tr.—E. J. Burke, Room 1314, Peoples Gas Bldg.,
 Conv., 1925.

Iowa District Gas Association

Date of Affiliation—May 21, 1919.
 Pres.—H. J. Carson, Cedar Rapids Gas Co., Cedar Rapids, Ia.
 Sec.-Tr.—H. K. Sterrett, 551 Seventh St., Des Moines, Ia.
 Conv., Cedar Rapids, Iowa, April 22, 23, 24, 1925.

Michigan Gas Association

Date of Affiliation—Sept. 18, 1919.
 Pres.—Chester Grey, Lansing Fuel & Gas Co., Lansing, Mich.
 Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
 Conv., Mackinac Island, Mich., July 9, 10, 11, 1925.

Missouri Association of Public Utilities

Pres.—C. L. Proctor, Empire District Electric Co., Joplin, Mo.
 Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
 Conv., Joplin, Mo., May 7, 8, 9, 1925.

New England Association of Gas Engineers

Date of Affiliation—Feb. 19, 1919.
 Pres.—H. N. Cheney, Boston Consolidated Gas Co., Boston, Mass.
 Sec.-Tr.—J. L. Tudbury, 247 Essex St., Salem, Mass.
 Conv., 1926.

Gas Sales Association of New England

Date of Affiliation—Oct. 1, 1919.
 Gov.—J. I. Quinn, Citizens Gas Co., Quincy, Mass.
 Sec.—J. H. Sumner, 719 Massachusetts Ave., Cambridge, Mass.
 Annual Meeting, 1925.

New Jersey Gas Association

Date of Affiliation—April 25, 1919.
 Pres.—Raymond W. Lee, Cumberland County Gas Co., Millville, N. J.
 Sec.-Tr.—R. A. Koehler, Public Service Gas Co., Newark, N. J.
 Conv., Newark, N. J., April 22 and 23, 1925.

Pacific Coast Gas Association

Date of Affiliation—Sept. 18, 1919.
 Pres.—E. L. Hall, Portland Gas & Coke Co., Portland, Ore.
 Exec. Sec.—Clifford Johnstone, 619 Wells Fargo Bldg., San Francisco, Calif.
 Conv., Portland, Ore., 1925.

Pennsylvania Gas Association

Date of Affiliation—April 10, 1919.
 Pres.—John A. Frick, Allentown-Bethlehem Gas Co., Allentown, Pa.
 Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
 Conv., Newark, N. J., April 22, 1925.

Southern Gas Association

Date of Affiliation—May 20, 1919.
 Pres.—W. H. Taylor, Georgia Railway & Power Co., Atlanta, Ga.
 Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
 Conv., Wilmington, N. C. June 9-11, 1925.

Southwestern Public Service Association

Date of Affiliation—September 26, 1923.
 Pres.—G. W. Fry, West Texas Utilities Co., Abilene, Texas.
 Chairman Gas Section—F. C. Armbruster, Southwestern Gas & Elec. Co., Shreveport, La.
 Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
 Conv., Houston, Texas, May 19-22, 1925.

Wisconsin Utilities Association

Date of Affiliation—March 25, 1919.
 Pres.—G. C. Neff, Wisconsin Power & Light Co., Madison, Wis.
 Chairman Gas Section—J. G. Felton, Northern States Power Co., La Crosse, Wis.
 Exec.-Sec.—J. N. Cadby, 445 Washington Bldg., Madison, Wis.
 Conv., Milwaukee, Wis., April 16, 1925.

Geographic Divisions

Eastern States Gas Conference

Date of Formation—April 11, 1923.
 Pres.—P. S. Young, Public Service Gas Co., Newark, N. J.

Sec.-Tr.—R. A. Koehler, Public Service Gas Co., Newark, N. J.

Conv., Newark, N. J., April 22 and 23, 1925.

Employment Bureau

SERVICES REQUIRED

WANTED—An experienced man to take charge of gas department in a small New England city. It is a water gas plant with annual sales of about 31,000,000 cu. ft. In writing state fully your training, experience and salary expected. Address A. G. A.

Key No. 046.

WANTED—Bookkeeper wanted for bookkeeping and other clerical work in general office in village of 4,000. School town in Northern New York. Address: St. Lawrence County Utilities, Inc., Potsdam, N. Y.

Key No. 048.

SALESMAN—We make a well known Trade Name line. Industrial gas equipment. Easily sold. Pays big commissions. Address A. G. A.

Key No. 051.

WANTED—Can use two industrial gas engineers in cities of about 100,000 population in the middle west. Address A. G. A.

Key No. 053.

WANTED—A gas company desires the services of a technically trained industrial gas and gas appliance sales engineer. (In writing, state fully your training.) Address A. G. A.

Key No. 054.

WANTED—Chemist for a Gas Company in New England who has had the requisite training and experience to do the regular routine chemical work and research work required. Address replies, giving details of training and experience, to A. G. A.

Key No. 055.

WANTED—Water heater salesman wanted by well-known manufacturer of automatic gas water heaters; preferably residing in Brooklyn, N. Y. Address A. G. A.

Key No. 056.

INDUSTRIAL GAS ENGINEER WANTED. A syndicate in Eastern New York requires a man with extensive experience on forging, heat treatment and annealing applications. Personality and sales experience essential. Address A. G. A.

Key No. 057.

GAS COMPANY operating in the Metropolitan District, New York, offers a permanent position to a thoroughly qualified Street Main Foreman. Address giving experience, salary expected and when services are available. Answers will be considered confidential if desired. Address A. G. A.

Key No. 058.

WANTED: Saleswoman capable of demonstrating and selling gas appliances, gas ranges, water heaters, etc., Nagoya, Japan, pop. 430,000. American, unmarried, age 25 to 35 years. Term of employment two years, salary 200 yen per month. Some commission on sales. Traveling expenses paid both ways, 1st class, and residence provided free. Address A. G. A.

Key No. 059.

WANTED, General Superintendent—property near New York City, two water gas plants, high and low pressure distribution. 300 miles of main, 30,000 consumers. Address A. G. A.

Key No. 060.

SERVICES OFFERED

ENG-SUPT. of one of the largest gas plants in the country would consider change. Desires to locate with company in which opportunities for future advancement are better than in present position. Is a married man. Has technical University training. No particular preference as to location. Address A. G. A.

Key No. 139.

WANTED—Position of responsibility as Manager or Industrial Fuel Engineer—18 years' varied experience in the gas business. References and service record furnished. Address A. G. A.

Key No. 142.

WANTED—Am open for position as appliance salesman with Gas Company or Appliance Manufacturer. Have had twelve years' experience selling ranges, water heaters, room heaters and illuminating devices. Am at present employed in this capacity by a large corporation, but desire to make a change. Can furnish references from present and past employers. Married. Can report on reasonable notice. Address A. G. A.

Key No. 179.

WANTED—An Executive Position in Commercial Department. Young man with 14 years' experience and a thorough knowledge of the gas business. Salary discretionary. Address A. G. A.

Key No. 186.

EXECUTIVE, with fifteen years' experience in oven practice on plants manufacturing surplus gas for city consumption, desires connection with growing public utility either as executive or position leading to same. College graduate, good personality, married. Available on reasonable notice. Address A. G. A.

Key No. 172.

GAS ENGINEER, 40, with thorough training (12 years) in the gas business and real executive ability, wishes to connect up with a live concern in any capacity where technical and commercial ability will count. At present engaged but could be available on two months' notice. Address A. G. A.

Key No. 176.

WANTED—Executive position by young man with eighteen years' (18) experience in all branches of gas business. Eight years (8) as manager. Past four years, vice-president and general manager of gas company with nearly 10,000 meters. Mechanical engineer. Will accept position as manager of company with 7,000 to 10,000 meters, assistant manager and engineer, with larger company. Married man. Replies must be strictly confidential. Address A. G. A.

Key No. 177.

WANTED—Position as Manager of Gas Company. Coal or water gas. College trained. Have served in works, street and office. Doubled meters and doubled output in last position. Address A. G. A.

Key No. 184.

WANTED—Executive position with more promise future by man with a broad practical experience in the manufacture and distribution of gas and electricity; also in the distribution of natural gas. Have operated successfully as executive of combined gas and electric property for over nineteen years. Services available upon reasonable notice to present employer. Address A. G. A.

Key No. 188.

POSITION—Wanted as Supt. of small gas company or as General Foreman of large plant. Approximately seventeen years' experience in all branches of manufacture and distribution, high and low pressure systems. Address A. G. A.

Key No. 190.

WANTED—An executive position in Commercial Department. Young married man with 12 years' experience and a thorough knowledge of gas and electric accounting. Moderate salary desired. Available on reasonable notice. Address A. G. A.

Key No. 191.

INDUSTRIAL ENGINEER available on short notice. Nine years' experience in industrial and commercial department supervision. Record and references will be furnished. Address A. G. A.

Key No. 192.

WANTED: Position as Manager of Gas Property. 10,000 meters or more; prefer city where public relations are not good. Address A. G. A.

Key No. 194.

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